

**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

ORDER NO. VSD9904M007  
D20

# Service Manual

**DVCPRO**

Digital Camera Recorder

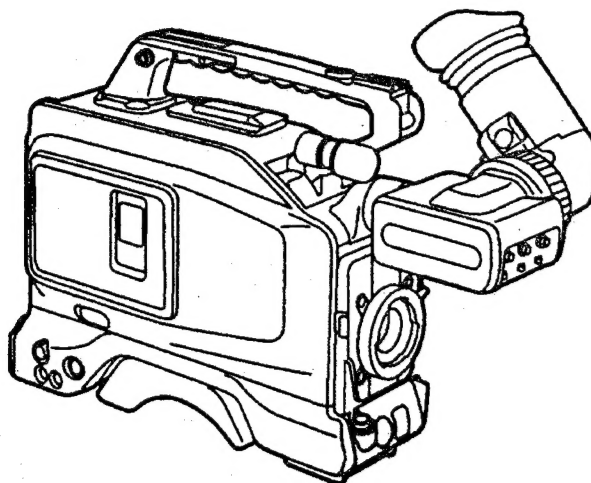
**AJ-D215P/HE**

Digital Video Interface Board

**AJ-YAD210P**

- Sec.1** *Operating Instructions*
- Sec.2** *Service Information*
- Sec.3** *Maintenance / Disassembly Procedures  
& Mechanical Adjustments*
- Sec.4** *Electrical Adjustments*
- Sec.5** *Block Diagrams*
- Sec.6** *Schematic Diagrams*
- Sec.7** *Circuit Board Diagrams*
- Sec.8** *Exploded Views &  
Replacement Parts List*

**AJ-D200 Revision Service Manual**  
This Service Manual contains the AJ-D200  
up-date service information's.



**Panasonic**

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## Specifications

### [GENERAL]

<b>Power supply:</b>	DC12 V (10.5V to 17.0V)
<b>Power consumption:</b>	16W (main unit including viewfinder)

**Operating ambient temperature:**

32°F to 104°F (0°C to 40°C)

**Storage ambient temperature:**

-4°F to 140°F (-20°C to 60°C)

**Operating ambient humidity:**

Less than 80% (relative humidity)

**Continuous operation time:**

Approx. 120 minutes

(with Anton Bauer Trimpack 14, continuous recording time)

**Dimensions**

(W × H × D): 4-15/16" × 11-1/2" × 13-5/16" (126 × 292 × 337 mm)

**Weight:**

7.7 lbs (3.5 kg) for main unit only

13.0 lbs (5.9 kg) for with NP-1 battery, viewfinder, Fujinon 14× lens,  
184-minute tape

### [CAMERA]

**Image sensor:** 1/3" IT-type CCD with on-chip lens (pixel shift system) ×3

**Pixels:** 542 (H) × 492 (V)

**Horizontal drive frequency:**

11.25 MHz

**Sensitivity:** 2000 lux, f/5.6

**Minimum illumination:** 5 lux (f/1.4 +18 dB)

**S/N ratio:** 60 dB (TYP)

**Horizontal resolution:** Approx. 500 lines (center)

**Vertical resolution:** 400 lines

**Sampling frequency:** 13.5 MHz/27 MHz

**Shutter speeds:** 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000

**Gain selection:** 0/6/12 dB or 0/9/18 dB

**Lens mount:** 1/3" bayonet mount

**Color separation optical system:**

Prism system (f/1.4)

**Registration error:** Less than 0.03% (full range, excluding lens distortion)

**ND filter:** 1/16 ND, manual ON/OFF setting enabled by slide switch

### [VIEWFINDER]

**Display tube:** 1.5" high-resolution monochrome tube

**Horizontal resolution:** 600 lines (center)

**External controls:** BRIGHT, CONTRAST, PEAKING controls,  
TALLY ON/OFF, ZEBRA ON/OFF, CHARACTER ON/OFF switches



**[VTR]** The video and audio performance specifications apply for a tape which has been recorded on this unit and played back on a standard player (ANALOG COMPONENT OUT).

**Tape speed:** 33.8201 mm/sec

**Recording/playback time:**

Approx. 184 min. (\*using AJ-5P92LP)

\* For AJ-5P92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

**FF/REW time:** Less than 8 min. (using AJ-5P92LP)

**Video signal band:** Brightness = 0 Hz to 5.75 MHz, +1.0 dB/-3.0 dB

**S/N ratio:** 55 dB

**Linearity:** Less than 2%

**Y/C delay:** Within 30 ns

**Audio sampling frequency:**

48 kHz (synchronized with video)

**Quantizing:** 16 bits/sample

**Frequency response:** 20 Hz to 20 kHz, +1.0 dB/-1.5 dB (at reference level)

**Distortion:** Less than 0.2% (at 1 kHz, operating level)

**Crosstalk:** Less than -65 dB (between channels, at 1 kHz)

**Wow and flutter:** Below measurable limits

**Headroom:** 20 dB

## [CONNECTORS]

**INPUT FRONT MIC:** Phantom +48V (built-in microphone), -60 dBu, balanced, 3 k $\Omega$   
(-60, -50 or -40 dBu setting possible on menu)

**AUDIO IN CH1/CH2 (XLR, 3P):**

-60, -50 or -40 dBu setting possible on menu, balanced, 10 k $\Omega$

Internal DIP switch setting:

Phantom 48V output possible  
line (-6/0/+4 dBu) switchable

**OUTPUT AUDIO OUT CH1/CH2 (Phono pin jack):**

-6 dBu, unbalanced, low impedance output

**HEADPHONE OUT:** Stereo mini jack

**VIDEO OUT (BNC):** 1.0 V<sub>P-P</sub>, 75  $\Omega$

**S-VIDEO OUT:** Y signal = 1.0 V<sub>P-P</sub>, 75  $\Omega$

C signal = 0.286 V<sub>P-P</sub> (burst), 75  $\Omega$

**OTHER DC IN (XLR, 4P)**

**LENS (12P)**

**DVCPRO interface connector (option):**

Complies with IEEE 1394-1995 standard

## [ACCESSORIES]

1.5" viewfinder

Microphone (attached to main unit)

Battery holder (attached to main unit)

Battery mounting connector and screw supporting Sony-made battery (NP-1B)

## Specifications

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### [GENERAL]

<b>Power supply:</b>	DC12 V (10.5 V to 17.0 V)
<b>Power consumption:</b>	18 W (main unit including viewfinder)

**Operating ambient temperature:**

0°C to 40°C

**Storage ambient temperature:**

-20°C to 60°C

**Operating ambient humidity:**

Less than 80% (relative humidity)

**Continuous operation time:**

Approx. 100 minutes

(with Anton Bauer Trimpack 14, continuous recording time)

**Dimensions**

(W × H × D):

126 × 292 × 337 mm

**Weight:**

3.7 kg for main unit only

6.1 kg for with NP-1 battery, viewfinder, Fujinon 14× lens, 184-minute tape

### [CAMERA]

**Image sensor:** 1/3" IT-type CCD with on-chip lens (pixel shift system) × 3

**Pixels:** 542 (H) × 584 (V)

**Horizontal drive frequency:**

11.25 MHz

**Sensitivity:** 2000 lux, f/5.6

**Minimum illumination:** 5 lux (f/1.4 +18 dB)

**S/N ratio:** 58 dB (TYP)

**Horizontal resolution:** Approx. 500 lines (centre)

**Vertical resolution:** 500 lines

**Sampling frequency:** 13.5 MHz/27 MHz

**Shutter speeds:** 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000

**Gain selection:** 0/6/12 dB or 0/9/18 dB

**Lens mount:** 1/3" bayonet mount

**Colour separation optical system:**

Prism system (f/1.4)

**Registration error:** Less than 0.03% (full range, excluding lens distortion)

**ND filter:** 1/16 ND, manual ON/OFF setting enabled by slide switch

### [VIEWFINDER]

**Display tube:** 1.5" high-resolution monochrome tube

**Horizontal resolution:** 600 lines (centre)

**External controls:** BRIGHT, CONTRAST, PEAKING controls,  
TALLY ON/OFF, ZEBRA ON/OFF, CHARACTER ON/OFF switches

**[VTR]** The video and audio performance specifications apply for a tape which has been recorded on this unit and played back on a standard player (ANALOG COMPONENT OUT).

**Tape speed:** 33.8539 mm/sec

**Recording/playback time:**

Approx. 184 min. (\*using AJ-5P92LP)

\* For AJ-5P92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

**FF/REW time:** Less than 8 min. (using AJ-5P92LP)

**Video signal band:** Brightness = 0 Hz to 5.75 MHz, +1.0 dB/-3.0 dB

**S/N ratio:** 55 dB

**Linearity:** Less than 2%

**Y/C delay:** Within 50 ns

**Audio sampling frequency:**

48 kHz (synchronized with video)

**Quantizing:** 16 bits/sample

**Frequency response:** 20 Hz to 20 kHz, (+1.0 dB, -1.5 dB) (at reference level)

**Distortion:** Less than 0.2% (at 1 kHz, operating level)

**Crosstalk:** Less than -65 dB (between channels, at 1 kHz)

**Wow and flutter:** Below measurable limits

## [CONNECTORS]

<b>INPUT</b>	<b>FRONT MIC:</b>	Phantom +48V (built-in microphone), -60 dBu, balanced, 3 k $\Omega$ (-60, -50 or -40 dBu setting possible on menu)
	<b>AUDIO IN CH1/CH2 (XLR, 3P):</b>	-60, -50 or -40 dBu setting possible on menu, balanced, 10 k $\Omega$ Internal DIP switch setting: Phantom 48V output possible line (-6/0/+4 dBu) switchable
<b>OUTPUT</b>	<b>AUDIO OUT CH1/CH2 (Phono jack):</b>	-6 dBu, unbalanced, low impedance output
	<b>HEADPHONE OUT:</b>	Stereo mini jack
	<b>VIDEO OUT (BNC):</b>	1.0 V <sub>P-P</sub> , 75 $\Omega$
	<b>S-VIDEO OUT:</b>	Y signal = 1.0 V <sub>P-P</sub> , 75 $\Omega$ C signal = 0.3 V <sub>P-P</sub> (burst), 75 $\Omega$
<b>OTHER</b>	<b>DC IN (XLR, 4P)</b>	
	<b>LENS (12P)</b>	
	<b>DVCPRO interface connector:</b>	Complies with IEEE 1394-1995 standard

## [ACCESSORIES]

1.5" viewfinder

Microphone (attached to main unit)

Battery holder (attached to main unit)

Battery mounting connector and screw supporting Sony-made battery (NP-1B)

# INTRODUCTION

This Service Manual contains the AJ-D215P, AJ-D215HE and AJ-YAD210P sections.

AJ-D215P and AJ-D215HE sections contain Operating Instructions, Service Information, Maintenance / Disassembly Procedures & Mechanical Adjustments, Electrical Adjustments, Block Diagrams, Schematic Diagrams, Circuit Board Diagrams and Exploded Views & Replacement Parts List sections.

AJ-YAD210P section contains Operating Instructions, Schematic Diagrams, Circuit Board Diagrams and Exploded Views & Parts List sections.

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AJ-YAD210P Digital Video Interface Board		
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# SAFETY PRECAUTIONS

## GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1\text{M}\Omega$  and  $5.2\text{M}\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

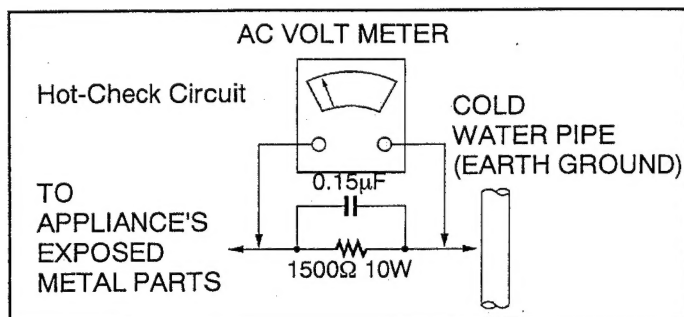


Figure 1

## LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5\text{k}\Omega$ , 10W resistor, in parallel with  $0.15\mu\text{F}$  capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 millilamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protected material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.  
**CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

## X-RADIATION

### WARNING

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
  2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.
- NOTE:** It is important to use an accurate periodically calibrated high voltage meter.
3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV,  $\pm 0.15\text{kV}$ . If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

■ **DO NOT REMOVE PANEL COVER BY UN-SCREWING.**

To reduce the risk of the electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

**WARNING:**

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

**CAUTION:**

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.**

**Lithium Battery**

**Warning**

The lithium battery in this equipment must only be replaced by qualified personnel. When necessary, contact your local Panasonic supplier.

"The lithium battery is a critical component (type number CR2032 or BR2032 manufactured by Panasonic.)

It must never be subjected to excessive heat or discharge. It must therefore only be fitted in equipment designed specifically for its use.

Replacement batteries must be of the same type and manufacturer. They must be fitted in the same manner and location as the original battery, with the correct polarity connections observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose. It should be disposed of in waste products destined for burial rather than incineration."

**CAUTION**

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

**VARNING**

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.


**ADVARSEL!**

Eksplussionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

**VAROITUS**

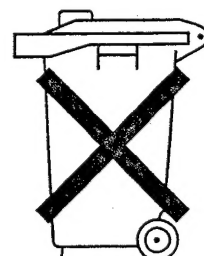
Paristo voi räjähtää, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

 indicates safety information.

**Attention/Attentie**

- Batteries are used for the main power source and memory back-up in the product. At the end of their useful life, you should not throw them away. Instead, hand them in as small chemical waste.
- Voor de primaire voeding en het reservegeheugen van het apparaat wordt gebruikgemaakt van een batterij. Wanneer de batterij is uitgeput, mag u deze niet gewoon weggooien, maar dient u deze als klein chemisch afval weg te doen.



# SECTION 1

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## OPERATING INSTRUCTIONS

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## Precautions for Use

1. **Vibration**  
Avoid using this product in any location where it will be subjected to a great deal of vibration.
2. **Ambient operating temperature**  
This product is designed to operate across a temperature range of 32°F to 104°F (0°C to +40°C). Adequate care should be taken when the product is operated outside this range since it may develop differences in interchangeability or it may not function properly, and its active service life will be shortened.
3. **Rain, humidity and dust**  
Minimize operation in the rain or when the humidity level is high since condensation will form inside the product, thereby causing failures. Take care when using the product in very dusty locations since dust will find its way inside the product which, in particular, will cause a deterioration in its characteristics.
4. **Sunlight**  
Do not point the lens in the camera section at the sun with the iris open. Neither should the viewfinder's eyepiece be pointed at the sun. Failure to heed this warning may cause malfunctioning inside the product.
5. **Handling**  
Do not drop the product or subject it to impact. Failure to heed this warning will cause malfunctioning. Also, do not poke objects inside the product while the cassette cover is in the raised position.
6. **Strong electrical and magnetic fields**  
Bear in mind that using this product in an extremely strong electrical or magnetic field may result in interference with the picture on the screen or with the sound.

## Features

### Compact and lightweight integrated camera/VTR unit with low power consumption


#### Camera with high picture quality

- Digital processing ensures that the high picture quality remains stable during prolonged use.
- A time code reader/generator is built into the unit.
- 1/3-inch interchangeable lenses are featured to enable top-quality operation.
- Use of the built-in ND filter makes it possible to obtain the proper aperture even when shooting in outdoor locations.

#### Other features

- The on-screen menu setting facility makes it easy to set a large number of functions.
- Installation of optional digital video interface board (AJ-YAD210P: DVCPRO Terminal <complies with IEEE 1394-1995 standard>) supported.
- Long-time recording possible up to a full 184 minutes. (using AJ-SP92LP\*)

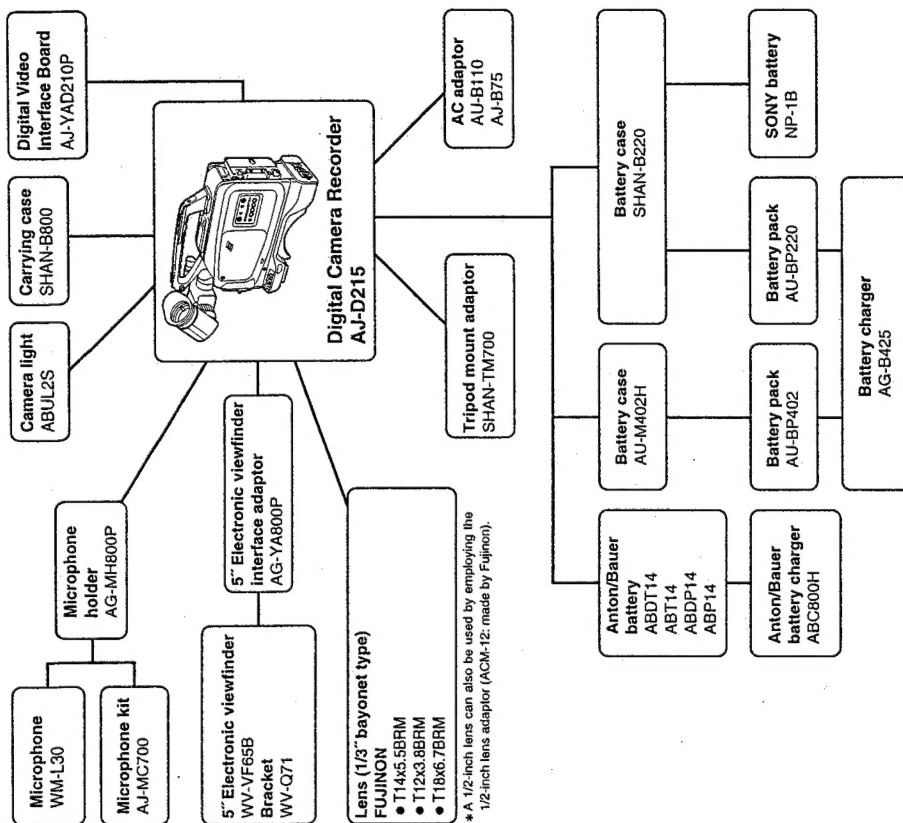
\*For AJ-SP92LP cassette tapes, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

#### CAUTION

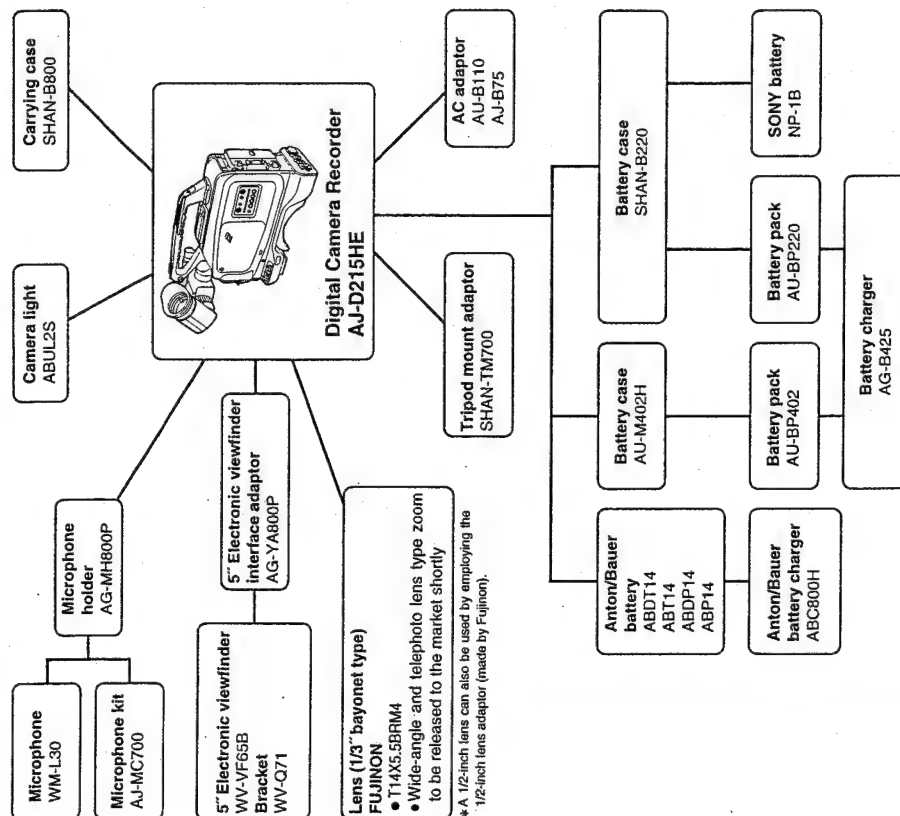
This camera/VTR product supports "L" size DVCPRO tapes only. Do not use consumer DV tapes or tapes of any other size.

## System chart

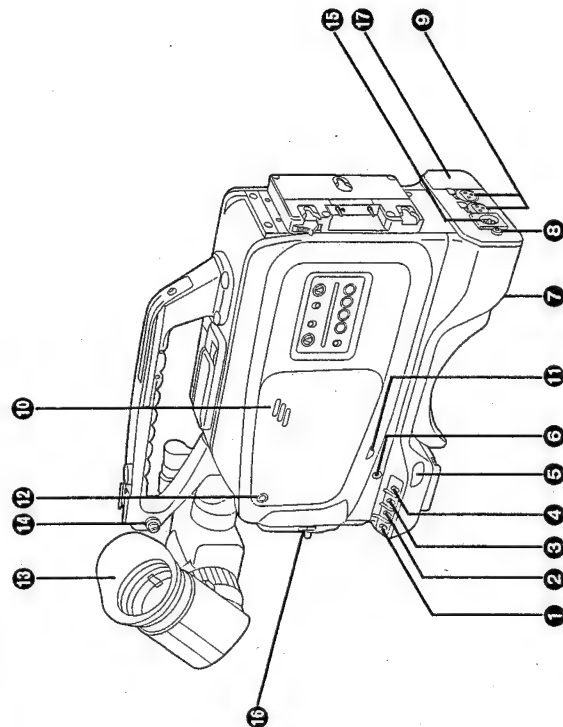




## System chart



## Parts and their functions



### 1 GAIN selector switch

When the camera picture is too dark, increase the gain to brighten the picture by setting this switch.

**0dB:** The switch is normally kept at this position.

**6/9dB:** The gain of the camera's video amplifier is increased at this position. Select 6 dB or 9 dB on the on-screen menu first. For further details, refer to the menu items (on pages 48, 49 and 53).

**12/18dB:** The gain of the camera's video amplifier is increased at this position. Select 12 dB or 18 dB on the on-screen menu first. For further details, refer to the menu items (on pages 48, 49 and 53).

The amount of noise also increases when the gain is increased.

### 2 White balance selector switch

**MEMO:** When the AUTO W/B (WHITE/BLACK) BAL switch on the front panel is operated, the white balance is adjusted automatically, and the adjustment value is stored in the internal memory.

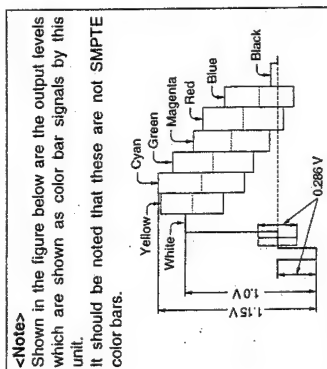
**PRST:** Although the preset mode was set to INDOOR when the unit was shipped from the manufacturing plant, there is a choice between three settings altogether on the on-screen menu. For further details, refer to the menu items (on pages 48, 49 and 53).

OUTDOOR	INDOOR	FLUOR
5000K	3200K	4500K

**ATW:** This is the automatic tracking white balance mode.

**Note:** It may not be possible to attain the correct white balance under some types of lighting.

- 3 OUTPUT selector switch**  
CAM: The video signals shot by the camera are output.  
BAR: The color bar signals are output.



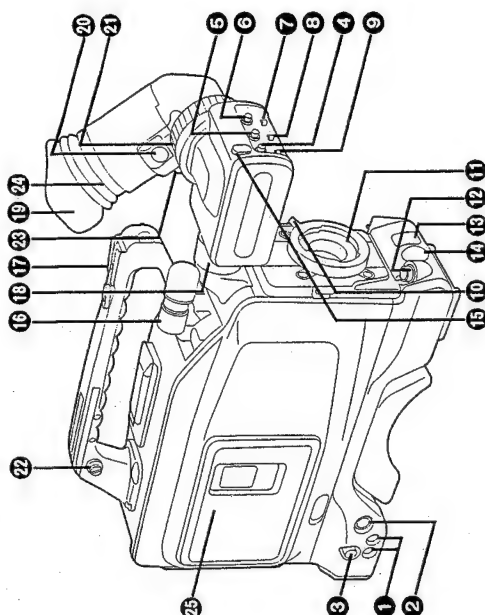
- 4 SHUTTER switch**  
This is the ON/OFF selector switch of the electronic shutter.  
OFF: The electronic shutter does not work at this position.  
ON: The electronic shutter is operational at this position.

**SELECT:** This position is used to change the speed of the electronic shutter. This is a non-locking switch. Each time it is operated, the shutter speed changes by one setting in the following sequence:  
1/100 → 1/125 → 1/250 → 1/500 → 1/1000 → 1/2000 → 1/4000 → 1/8000. When the switch is operated at 1/8000, the speed returns to the 1/100 setting.

- 5 POWER switch**  
ON: All the functions of the camera VTR are made operational.  
OFF: The power to the camera VTR is turned off.

- 6 MODE CHECK switch**  
This enables the settings of the camera's function switches to be checked in the viewfinder.

- 7 BREAKER switch**  
If trouble causes an excessively high current to flow inside the unit, the circuit breaker is tripped, causing the power to be turned off automatically to protect the unit.  
Upon completion of inspection inside or repair work on the unit, push this button to the "in" position. The power will be turned on again provided that no trouble has occurred.



- 1 AUDIO OUT connectors (pin jacks)**

- 2 S-VIDEO OUT connector (Y/C connector)**

**CAUTION:**  
Bear in mind that if any action that involves playing back a tape on this VTR (such as REC CHECK or relate) is taken while a back-up VTR is connected to the S-VIDEO OUT connector to record pictures, the pictures played back by this unit will be recorded on the back-up VTR.

- 3 VIDEO OUT connector (BNC)**

**CAUTION:**  
Bear in mind that if any action that involves playing back a tape on this VTR (such as REC CHECK or relate) is taken while a back-up VTR is connected to the VIDEO OUT connector to record pictures, the pictures played back by this unit will be recorded on the back-up VTR.

- 4 PEAKING control**

Turning this control sharpens the outlines of the images in the viewfinder to facilitate focusing. The control has no effect on the camera's output signals.

- 5 CONTRAST control**

This is used to adjust the contrast of the images in the viewfinder. It has no effect on the camera's output signals.

- 6 BRIGHT (brightness) control**

This is used to adjust the brightness of the images in the viewfinder. The images become brighter when it is turned clockwise. It has no effect on the camera's output signals.

- 7 TALLY ON/OFF switch**

ON: The tally lamp on the front of the viewfinder lights.  
OFF: The tally lamp on the front of the viewfinder does not light.

- 8 ZEBRA (zebra pattern) ON/OFF switch**

ON: A zebra pattern is displayed in the viewfinder.  
OFF: A zebra pattern is not displayed.

- 9 CHARACTER ON/OFF switch**

This turns the character display ON or OFF.  
ON: Characters are displayed in the viewfinder.  
OFF: Characters are not displayed in the viewfinder.

The color temperature display in the ATW mode and the SCENE data MARK will appear even when the CHARACTER ON/OFF switch is at the OFF position.

**10 Lens locking lever**

After the lens has been attached to the lens mount, this lever is tightened up to lock the lens in position.

**11 Lens mount (bayonet type)**

This attaches the lens.

**12 LENS connector (12-pin)**

The connecting cord of the lens is connected here. For a detailed description of the lens to be used, read the instruction manual which accompanies the lens.

**13 AUTO W/B (WHITE/BLACK) BAL switch**

**AWB:** The white balance and black balance are automatically adjusted. When the white balance selector switch is set to the MEMO position and then the AUTO W/B BAL switch is operated, the adjustment value is stored in the unit's memory. Bear in mind that no operation results when the selector switch is set to the ATW or PRST position.

**14 VTR START/STOP button**

This is used to start or stop the recording.

**15 TALLY lamp**

This lights when the image shot by the camera is being recorded by the VTR. It lights or flashes in tandem with the TALLY lamp inside the viewfinder.

**16 Microphone**

This is a compact unidirectional microphone. A microphone with sharp directionality can be attached by replacing the microphone provided with the optional holder.

**17 Accessory hole**

A video light or other accessory is installed here.

**18 Viewfinder locking ring**

This is used to attach or remove the viewfinder. When the ring is loosened, the viewfinder can be rotated by 90 degrees and pointed upward.

**19 Eye cup**

**20 Eye cup unlocking lever**

This is used to remove the eye cup. The eye cup is removed by moving the lever in the direction of the arrow and then sliding the eye cup free.

**21 Viewfinder locking stopper**

This is used to adjust the viewfinder's position. To adjust the position, loosen the stopper and move the viewfinder to the left or right. After having adjusted the position, tighten up the stopper to lock the viewfinder in place.

**22 Shoulder belt fitting**

The shoulder belt is fastened here.

**23 Diopter control (bottom panel)**

Adjust this to match your eyesight so that you can clearly see the images inside the viewfinder.

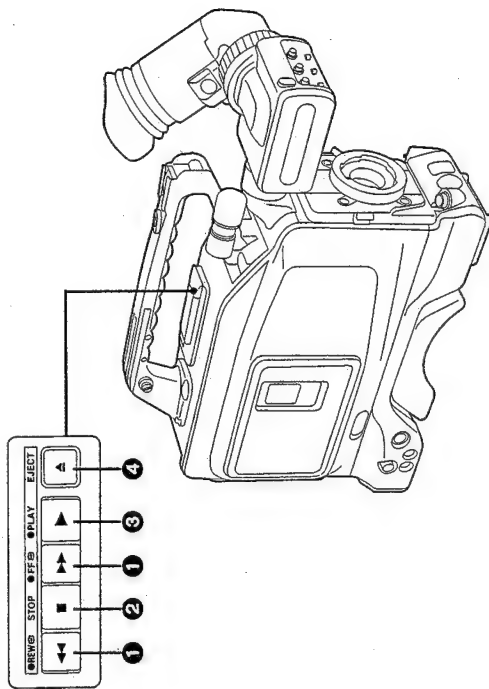
**24 Eyepiece position adjustment ring**

This enables the eyepiece position to be adjusted forward or backward when used in the unlocked status. Upon completion of the adjustment, set it to the LOCK status to lock the eyepiece in position.

**25 Cassette holder**

This is the slot where the cassette tape is loaded.

**Function buttons**



**1 REW (rewind)/FF (fast forward) buttons**

- When the REW or FF button is pressed while the tape has stopped traveling, the tape is rewound or fast forwarded at the normal rewinding or fast forwarding speed in the E-E mode.

- When the REW or FF button is pressed while the tape is being played, the tape is reviewed or cued at approximately 4.5 times the normal tape speed.

- When the REW or FF button is pressed in the STILL or REC PAUSE mode, the tape is reviewed or cued at approximately 1 times the normal tape speed.

**2 STOP button**

The tape stops traveling when this button is pressed. The button does not work during recording. To stop the tape during recording, first establish the REC/PAUSE mode and then press the STOP button.

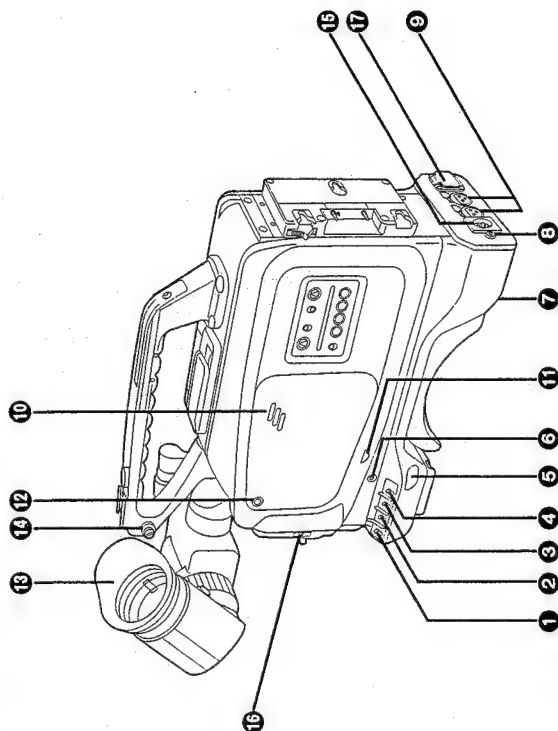
**3 PLAY button/lamp**

- When this button is pressed, play is commenced and its lamp lights. When it is pressed again, the STILL mode is established, and when it is pressed once more, the PLAY mode is established again.

**4 EJECT button**

- When this button is pressed, the cassette holder rises, and the cassette tape can be loaded or removed. The button does not work when the VTR is in the REC mode. To eject a tape in the REC mode, first establish the REC/PAUSE mode and then press the EJECT button.

## Parts and their functions

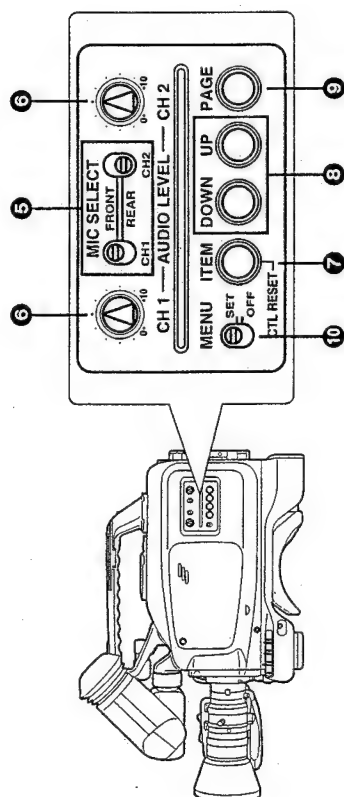


- 1 GAIN selector switch**  
When the camera picture is too dark, increase the gain to brighten the picture by setting this switch.  
**0dB:** The switch is normally kept at this position.  
**6/9dB:** The gain of the camera's video amplifier is increased at this position. Select 6 dB or 9 dB on the on-screen menu first. For further details, refer to the menu items (on pages E-49, E-50 and E-54).
- 2 White balance selector switch**  
**MEMO:** When the AUTO W/B (WHITE/BLACK) BAL switch on the front panel is operated, the white balance is adjusted automatically, and the adjustment value is stored in the internal memory.  
**PRST:** Although the preset mode was set to INDOOR when the unit was shipped from the manufacturing plant, OUTDOOR can be selected instead using the on-screen menu. For further details, refer to the menu items (on pages E-49, E-50 and E-54).

OUTDOOR	INDOOR
5000K	3200K

**ATW:** This is the automatic tracking white balance mode.

**Note:** It may not be possible to attain the correct white balance under some types of lighting.



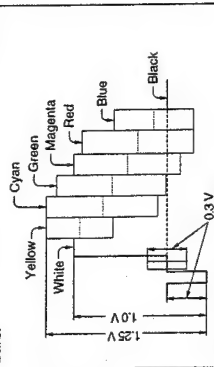
- 5 Audio input selector (MIC SELECT) switches**  
These switches are used to select the CH1 and CH2 audio input.  
**FRONT:** Set to this position when recording audio signals from the microphone incorporated in the camera.  
**REAR:** Set to this position when connecting external microphones to the audio input connectors (XLR 3P) on the rear panel and recording the audio signals from these microphones.
- 6 Audio level controls**  
These are used to adjust the CH1 and CH2 recording levels.
- 7 ITEM button**  
This is used to select menu items. When the MENU switch is at OFF, it functions as the reset button for the CTL counter.
- 8 DOWN and UP buttons**  
These are used to make changes to the menu settings.
- 9 PAGE button**  
This is used to set the menu items.
- 10 MENU SET/OFF selector switch**  
**SET:** Set to this position when displaying or making changes to menu items.  
**OFF:** The switch is normally kept at this position.

### 3 OUTPUT selector switch

**CAM:** The video signals shot by the camera are output.  
**BAR:** The colour bar signals are output.

**<Note>**

Shown in the figure below are the output levels which are shown as colour bar signals by this unit. It should be noted that these are not EBU colour bars.



### 4 SHUTTER switch

This is the ON/OFF selector switch of the electronic shutter.

**OFF:** The electronic shutter does not work at this position.

**ON:** The electronic shutter is operational at this position.

**SELECT:** This position is used to change the speed of the electronic shutter. This is a non-locking switch. Each time it is operated, the shutter speed changes by one setting in the following sequence:  
 1/100 → 1/125 → 1/250 → 1/500 → 1/1000 → 1/2000 → 1/4000 → 1/8000. When the switch is operated at 1/8000, the speed returns to the 1/100 setting.

### 5 POWER switch

**ON:** All the functions of the camera VTR are made operational.

**OFF:** The power to the camera VTR is turned off.

### 6 MODE CHECK switch

This enables the settings of the camera's function switches to be checked in the viewfinder.

### 7 BREAKER switch

If trouble causes an excessively high current to flow inside the unit, the circuit breaker is tripped, causing the power to be turned off automatically to protect the unit.

Upon completion of inspection inside or repair work on the unit, push this button to the "in" position. The power will be turned on again provided that no trouble has occurred.

### 8 Earphone (PHONE) jack

This is the earphone (stereo) jack for monitoring the sound. When an earphone is connected, no sound will be heard from the speaker.

### 9 Audio input connectors

External microphones are connected here. Line input signals can also be connected by setting an internal switch to the corresponding position.

### 10 Speaker

The sound can be monitored through this speaker.  
 • The sound from the speaker is automatically cut off when an earphone is connected to the PHONE jack.  
 • The CH1 and CH2 sound is mixed and heard as the monitored sound.

### 11 Audio monitor level control

This volume control is used to adjust the sound when it is being monitored.

### 12 MARK/CANCEL button

This is the SCENE data function switch. For further details, refer to the SCENE data function section (on pages E-57 and E-58).

### 13 Viewfinder

### 14 Shoulder belt fitting

The shoulder belt is fastened here.

### 15 External DC input socket

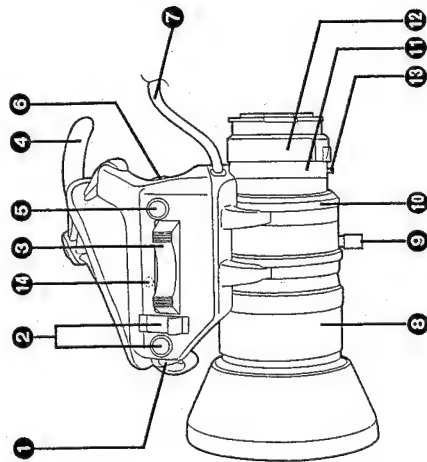
This socket is for the external power (DC) supply. Connect an AC adaptor. When the adaptor is connected, power is automatically supplied from the external power source.

### 16 ND filter ON/OFF switch

**OFF:** The ND filter is not used.  
**ON:** The ND filter is used.

### 17 DVCPRO interface connector

This connector is for digital AV interface. By connecting it to an AJ-D230H (digital VTR) using the specified cable, it becomes possible to digitally transfer AV signals from the AJ-D215H. It then becomes possible to use it as a backup recorder for the AJ-D230H.  
 (Complies with IEEE1394-1995 standard)



### 1 Automatic iris control

This enables the automatic iris speed to be adjusted.

Removal of the rubber cap reveals the control inside. The speed is increasing by turning the control clockwise but take care not to turn it too far since hunting (continuous cycling) will occur. This control must be adjusted when the lens has been replaced or when a lens has been mounted for the first time.

### 2 Lens iris selector switch (IRIS)

(A) side: The iris is adjusted automatically.  
 (M) side: Set to this position to adjust the iris manually.

### 3 Power zoom control switch

The zoom can be controlled electrically by setting the power/manual zoom selector switch to SERVO and then pressing the power zoom control switch. The zoom speed differs depending on the force with which the switch is pressed.

### 4 Hand strap

Adjust this to fit the size of your hand.

### 5 Return switch (RET, REC CHECK)

This switch is for checking a recording. When it is pressed in the recording pause mode, the recording check function is activated, the recorded section is played back, and then the recording is placed in the pause mode.

### 6 VTR start/stop switch

This switch provides easy manual access to starting and stopping the VTR recording. When it is pressed once, recording starts; when it is pressed again, it stops. When using this lens, the VTR can be controlled by this switch or the VTR start/stop switch on the camera.

### 7 Lens cable (12-pin)

This cable is to be connected to the LENS connector.

### 8 Focus ring

This ring is turned to focus the lens.

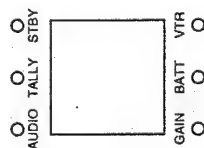
### 9 Zoom ring

To adjust the screen size, set the power/manual zoom selector switch to MANU, and turn this ring.

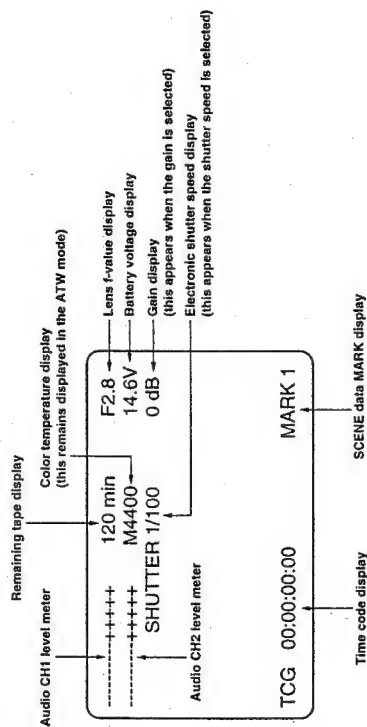
## Viewfinder displays

### LED displays

- AUDIO (yellow):** This is not used in this system.
- TALLY (red):** This lights during recording. It flashes as the tape is approaching the recording position from unloading or when trouble has occurred.
- STBY (green):** This is not used in this system.
- GAIN (yellow):** This lights when the camera gain is increased.
- BATT (yellow):** This flashes when the battery charge has dropped.
- VTR (yellow):** This lights or flashes when trouble has occurred in the VTR.



### Character displays



- These displays appear when the CHARACTER switch at the front of the viewfinder is set to ON.
- Each individual display can be turned off by setting the corresponding menu item.
- When the mode check switch has been pressed, the current statuses are displayed regardless of whether the individual displays have been set ON or OFF using the corresponding menu items or whether the CHARACTER switch is ON or OFF.
- The color temperature display in the ATW mode and the SCENE data MARK will appear even when the CHARACTER ON/OFF switch is at the OFF position.

### 10 Iris ring

To adjust the iris, set the lens iris selector switch (IRIS) to M, and turn this ring.

### 11 Flange back adjustment ring

To adjust the flange back, loosen the flange back locking knob, and turn this ring. The ring must be adjusted when the lens has been replaced or when a lens has been mounted for the first time.

### 12 Macro ring

To take close-ups, set the lens all the way to the wide position, and turn this ring.

### 13 Flange back locking knob

Use this knob to lock the flange back after it has been adjusted.

### 14 Power/manual zoom selector switch

When this switch is set to SERVO, the zoom can be adjusted using the power zoom control switch. When it is set to MANU, the zoom can be adjusted using the zoom ring.

Also refer to the operating instructions accompanying the lens you have purchased.

## Error message displays

When an error occurs, an error message appears in the viewfinder. There are two types of error messages: those which appear when the power is switched on, and those which appear during operation. The tables given below indicate the causes and remedial action for the corresponding error messages.

### Error messages which appear when the power is switched on

Error display	Cause	Remedial action
BACKUP BATTERY EMPTY	This appears when the internal clock battery has run down.	Replace the unit's back-up battery. For the replacement procedure, refer to page 58, and consult with your dealer.
	<p><b>Remarks:</b></p> <p>A flat back-up battery will interfere with the clock and time code free run functions although all other functions will remain unaffected. Replace the back-up battery at the earliest possible opportunity.</p> <p>The BACKUP BATTERY EMPTY display will appear even when the power is turned back on immediately after the back-up battery was replaced. This is normal and not indicative of a malfunction.</p>	
FLASH MEMORY EMPTY	<p>This appears when garbage data in the built-in flash memory needs to be collected.</p> <p>A special memory called a flash memory is used inside this unit. It contains all the menu settings, white balance adjustment data and many other types of data. Due to the fact that this is a special memory, the old data no longer required when menu changes are made, for instance, are retained. Consequently, garbage memory contents such as these must be collected from time to time.</p>	<p>Proceed with garbage collection on the MAINTENANCE menu screen among the menu items. Refer to the menu items (on pages 48, 49 and 55).</p>
	<p><b>Remarks:</b></p> <p>This display appears well ahead of time so there is no need to panic and initiate garbage collection immediately. The garbage collection processing takes some time (about 1 minute) so it should be done when there is a spare moment.</p>	

### Error messages which appear during operation

Error display	Cause	Remedial action
TOO BRIGHT ERROR	This appears when the white balance is to be adjusted (when the AUTO WB/BAL switch was operated) or when the screen is excessively bright.	Stop down the iris a little more, and adjust the white balance. If the error display remains, insert the electronic shutter or attach the ND filter.
TOO DARK ERROR	This appears when the white balance is to be adjusted (when the AUTO WB/BAL switch was operated) or when the screen is excessively dark.	Open the iris a little more, increase the gain (if this is warranted by the subject brightness), and adjust the white balance. If the error display remains, direct some light onto the subject.
LENS UNIT ERROR	This appears when the lens cable has been disconnected or when the lens iris control circuit has been damaged.	The cause is almost always a disconnected lens cable. If the display appears even when the cable is connected properly, consult with your dealer.
SELECT SW ERROR	This appears when the AUTO WB/BAL switch was operated with the white balance selector switch at a position other than MEMO.	Adjust the white balance (operate the AUTO WB/BAL switch) with the white balance selector switch at the MEMO position.
OUTPUT SW ERROR	This appears when the AUTO WB/BAL switch was operated with the OUTPUT switch at a position other than CAM.	Adjust the white balance (operate the AUTO WB/BAL switch) with the OUTPUT switch at the CAM position.
BLACK BAL ERROR	This points to a malfunction in the camera unit.	Consult with your dealer.
WHITE BAL ERROR TRY AGAIN	This appears when the white balance was not attained properly due to some condition or other.	<p>If the TOOL BRIGHT ERROR, TOO DARK ERROR or LENS UNIT ERROR message has appeared, take the corresponding measure, and then try adjusting the white balance again.</p> <p>If the WHITE BAL ERROR TRY AGAIN message has appeared but the TOOL BRIGHT ERROR, TOO DARK ERROR or LENS UNIT ERROR message has not appeared, proceed to attain the white balance again. If the display still appears even after two or three attempts, consult with your dealer.</p>
<p><b>Remarks:</b></p> <p>The above errors are detected when the white balance is adjusted (when the AUTO WB/BAL switch has been operated). The LENS UNIT ERROR is also detected immediately after the power has been switched on.</p>		
SERVO	This appears when an unrecorded part of a tape is played back or at other times when the VTR servo lock is disengaged.	It is normal for this display to appear with unrecorded parts of tapes. If the display appears during the playback of an obviously recorded tape or during recording, this points to a malfunction. Consult with your dealer.
HUMID	This signifies that condensation has formed. Refer to page 63 where detailed instructions can be found.	Refer to page 63 where detailed instructions can be found.
POWER OFF	This is not an error message. It is a warning which indicates that the power will be turned off very shortly.	

## Viewfinder displays

Error messages which appear during operation

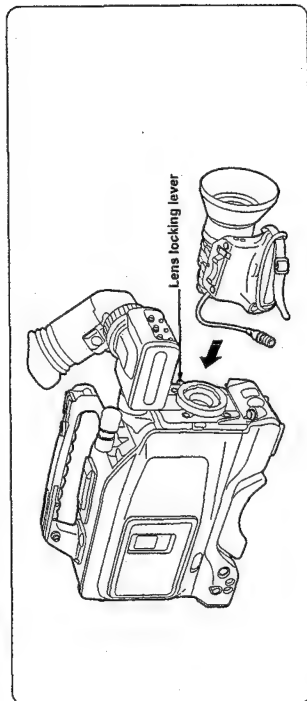
Error display	Cause	Remedial action
TOO BRIGHT ERROR	This appears when the white balance is to be adjusted (when the AUTO W/B BAL switch was operated) or when the screen is excessively bright.	Stop down the iris a little more, and adjust the white balance. If the error display remains, insert the electronic shutter or attach the ND filter.
TOO DARK ERROR	This appears when the white balance is to be adjusted (when the AUTO W/B BAL switch was operated) or when the screen is excessively dark.	Open the iris a little more, increase the gain (if this is warranted by the subject brightness), and adjust the white balance. If the error display remains, direct some light onto the subject.
LENS UNIT ERROR	This appears when the lens cable has been disconnected or when the lens iris control circuit has been damaged.	The cause is almost always a disconnected lens cable. If the display appears even when the cable is connected properly, consult with your dealer.
SELECT SW ERROR	This appears when the AUTO W/B BAL switch was operated with the white balance selector switch at a position other than MEMO.	Adjust the white balance (operate the AUTO W/B BAL switch) with the white balance selector switch at the MEMO position.
OUTPUT SW ERROR	This appears when the AUTO W/B BAL switch was operated with the OUTPUT switch at a position other than CAM.	Adjust the white balance (operate the AUTO W/B BAL switch) with the OUTPUT switch at the CAM position.
BLACK BAL ERROR	This points to a malfunction in the camera unit.	If the message "BLACK BAL ERROR" appears in the viewfinder when the power is turned on, perform the steps listed below.
<p>1. If the message "BLACK BAL ERROR" continually flashes on and off when the power is turned on: Confirm that the lens cable is properly connected. If the cable is disconnected, reconnect it. If "BLACK BAL ERROR" is displayed even though the cable is properly connected, consult your dealer.</p> <p>2. If the message "BLACK BAL ERROR" appears once or twice when the power is turned on and then disappears a few seconds later: This indicates that the unit performed ABB (Auto Black Balance) processing when the power was turned on, and that the processing was successful when retried. The unit may be used as is.</p>		
WHITE BAL ERROR TRY AGAIN	This appears when the white balance was not attained properly due to some condition or other.	Change the iris setting (the brightness) slightly and then try again. If the message continues to appear even after two or three attempts, consult your dealer.
<p><b>Remarks:</b> The above errors are detected when the white balance is adjusted (when the AUTO W/B BAL switch has been operated). The LENS UNIT ERROR is also detected immediately after the power has been switched on.</p>		
SERVO	This appears when an unrecorded part of a tape is played back or at other times when the VTR servo lock is disengaged.	It is normal for this display to appear with unrecorded parts of tapes. If the display appears during the playback of an obviously recorded tape or during recording, this points to a malfunction. Consult with your dealer.
HUMID	This signifies that condensation has formed. Refer to page E-66 where detailed instructions can be found.	Refer to page E-66 where detailed instructions can be found.
POWER OFF	This is not an error message. It is a warning which indicates that the power will be turned off very shortly.	

## Preparations

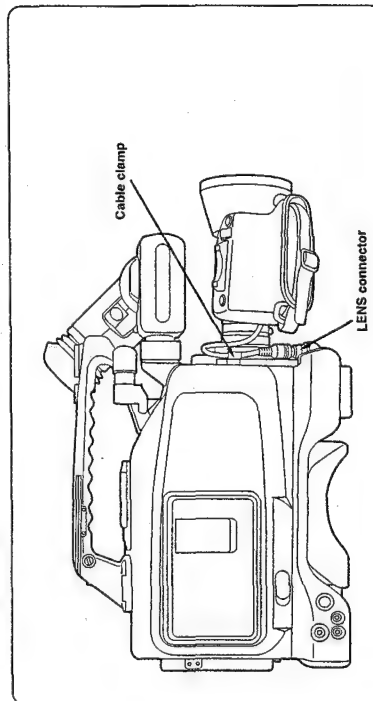
## ■ Attaching the peripheral units

## Attaching the lens

1 Position the lens, insert it, and lock it in place using the lens locking lever.



2 Connect the cord to the LENS connector, and secure it using the cable clamp.



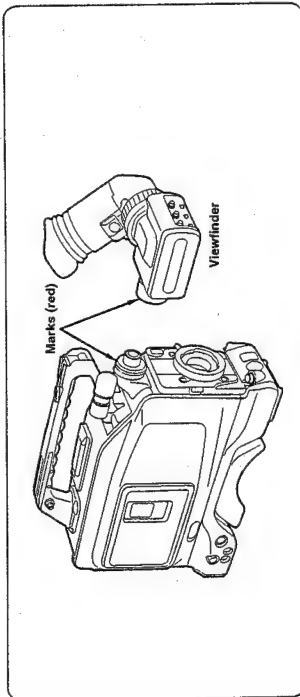
**Notes:**

- Refer to the operating instructions accompanying the lens for details on handling the lens.
- Attach the lens cap to protect the unit when the lens has been removed.

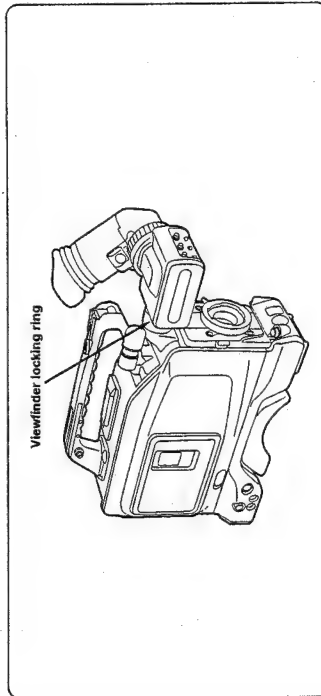


## Mounting the viewfinder

- 1 Align the positions of the marks (red), and fit into place.



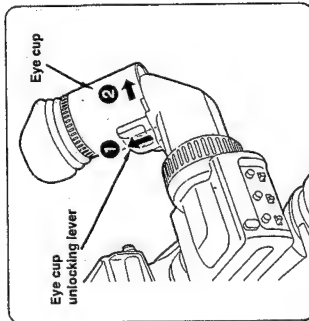
- 2 Turn the viewfinder locking ring to lock the viewfinder into place.



The viewfinder can be turned by 90 degrees by loosening the locking ring.

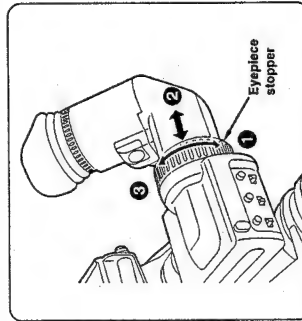
## Removing the eye cup

- 1 Move the eye cup unlocking lever in the direction indicated by the arrow.
- 2 Slide the eye cup in the direction indicated to remove it.



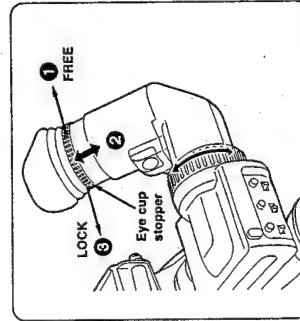
## Adjusting the eyepiece position

- 1 Set the eyepiece stopper to FREE.
- 2 Move the eyepiece toward the left or right to a position which affords the easiest viewing.
- 3 Tighten the eyepiece stopper.



## Adjusting the eye cup position

- 1 Set the eye cup stopper to FREE.
- 2 Adjust the eye cup by moving it toward you or away from you.
- 3 Set the eye cup stopper to LOCK to lock the eye cup in place.

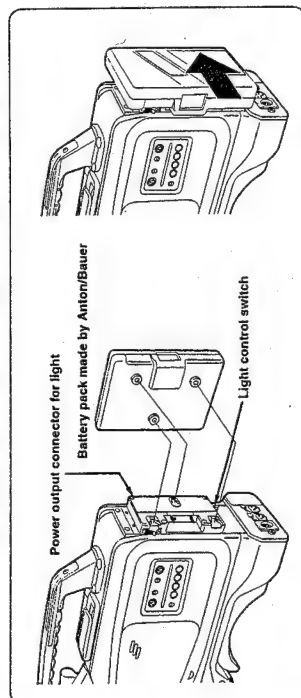


## When using a battery pack made by Anton/Bauer

Before using the battery pack, charge it using the special battery charger made by Anton/Bauer. For the charging time and other details, refer to the operating instructions of the battery charger used.

### 1 Attach the battery pack made by Anton/Bauer.

Insert it in the direction indicated by the arrow and slide it into place.



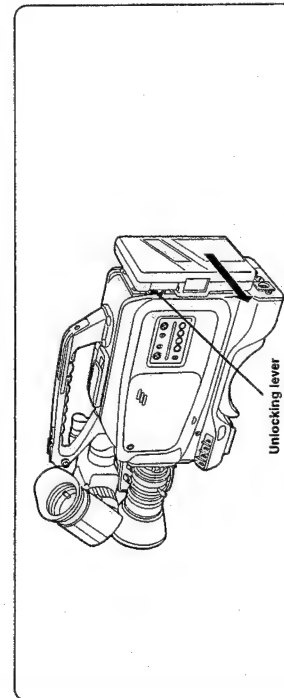
- Provided on the battery holder made by Anton/Bauer are a power output connector for a light and a light control switch. A light can be easily attached. For details on lighting systems, consult an Anton/Bauer representative.

### 2 Set menu item 7. BATTERY (BATT.SELECT) to the battery which is to be used.

For further details, refer to the menu items (pages 48 to 50).

#### Remarks:

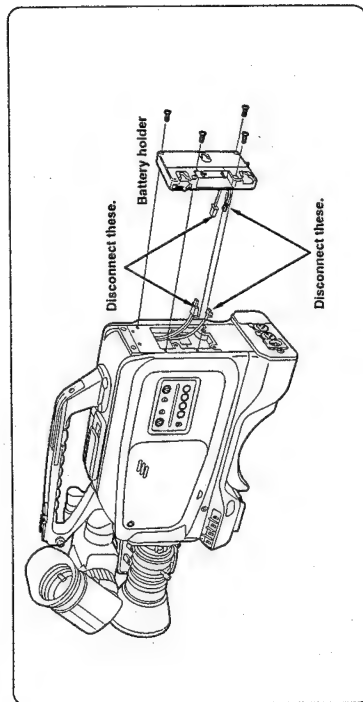
- To remove the battery pack  
While holding the unlocking lever on the battery holder all the way down, slide the battery pack in the direction indicated by the arrow.



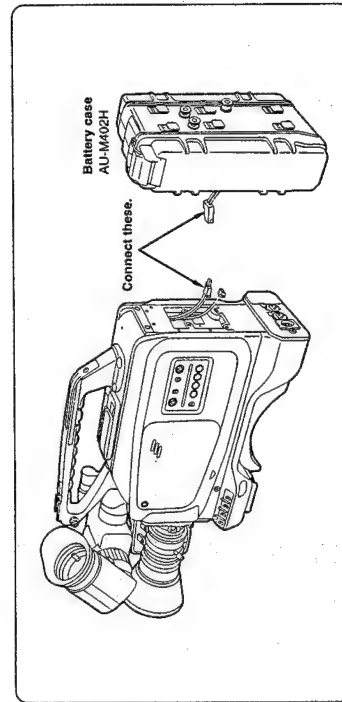
## When using the AU-BP402 battery pack

Charge the AU-BP402 battery pack using the AG-B425 battery charger. It takes about an hour to charge the battery pack. For further details, refer to the operating instructions accompanying the AG-B425 battery charger.

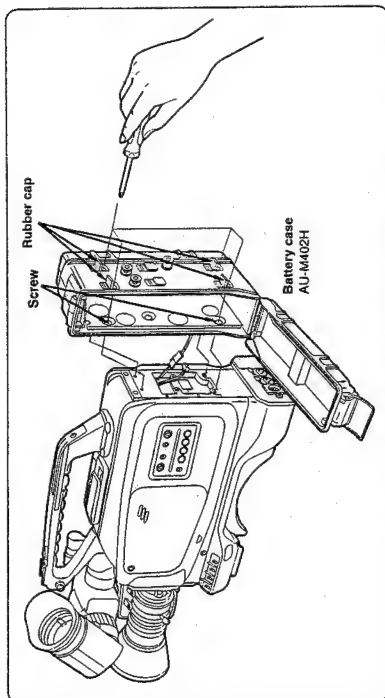
### 1 Remove the battery holder.



### 2 Connect the unit's cables to the AU-M402H battery case cables.



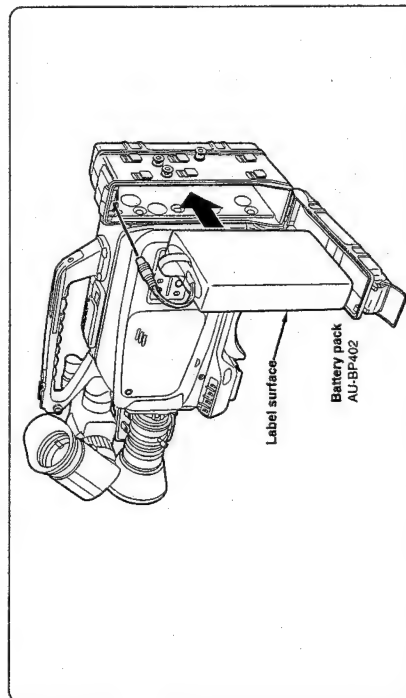
- 3 Mount the AU-M402H battery case onto the unit using a screwdriver.



Holes with the screws recessed inside can be seen when the cover is opened and the rubber caps are lifted. Tighten up these screws using a screwdriver so that the battery case is mounted onto the unit. Tighten the screws up all the way.

**CAUTION:** Do not pull the rubber caps with too much force.

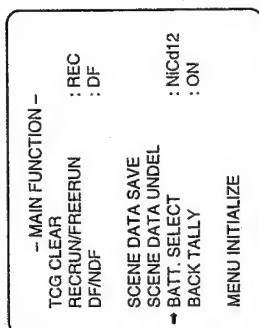
- 4 Connect the plug of the battery pack to the connector inside the battery case, and install the battery pack inside the case.



**CAUTION:** The unit's power must be turned off before the plug is connected or disconnected.

- 5 Set menu item 7. BATTERY (BATT.SELECT) to NiCd12V.

Menu item screen (viewfinder)



For further details, refer to the menu items (pages 48 to 50).

## 5 Set menu item 7. BATTERY (BATT.SELECT) to NiCd12V.

Menu item screen (viewfinder)

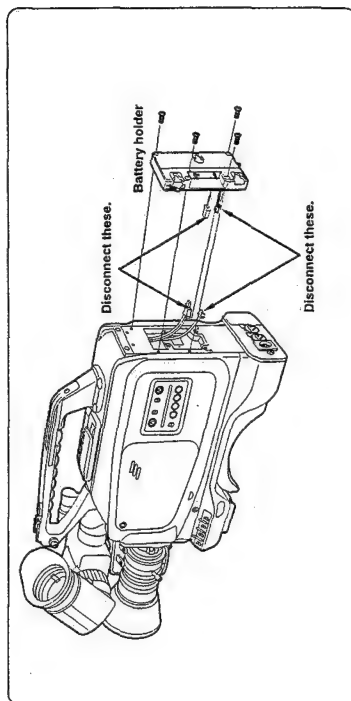
- MAIN FUNCTION -	
TCG CLEAR	: REC
RECRUN/FREERUN	
SCENE DATA SAVE	
SCENE DATA UNDEL	: NiCd12
- BATT. SELECT	: ON
BACK TALLY	
MENU INITIALIZE	

For further details, refer to the menu items (pages E-49 to E-51).

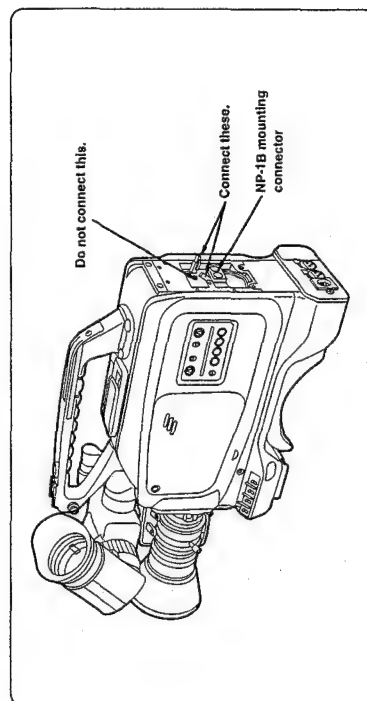
## When using the NP-1B battery made by Sony

Charge the NP-1B battery using the special battery charger made by Sony. For the charging time and other details, refer to the operating instructions accompanying the battery charger used.

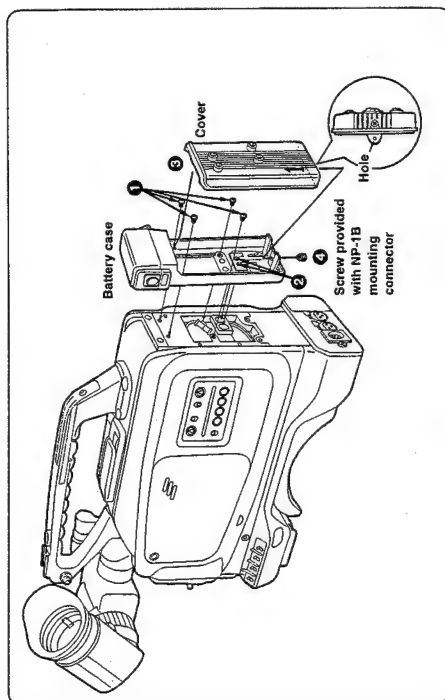
### 1 Remove the battery holder.



### 2 Attach the accessory NP-1B mounting connector.



### 3 Mount the battery holder made by Sony

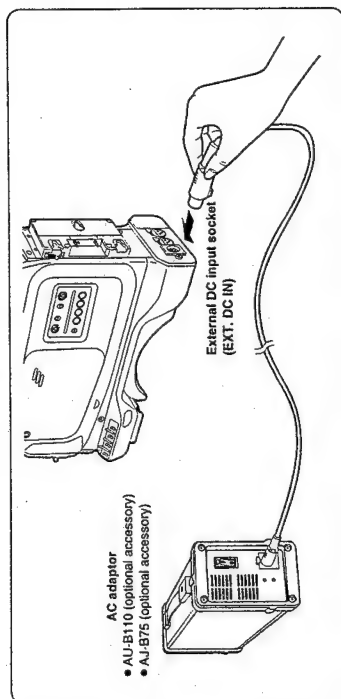


Before proceeding any further, remove the battery holder cover.

- 1 Mount the battery case using the mounting screws.
- 2 Tighten the power contact screw.
- 3 Insert the top of the cover in the direction indicated by the arrow.
- 4 Align the hole at the bottom (metal part) of the cover with the hole at the bottom of the battery case and mount the battery holder using the screw provided with the NP-1B mounting connector.

When using an AC power source  
(when using the AU-B110/AJ-B75 AC adaptor)

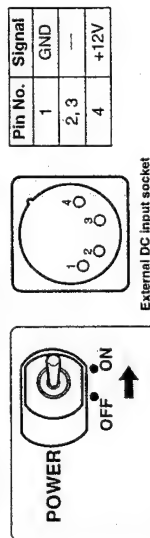
### 1 Connect the unit's external DC input socket to the DC OUT connector on the AU-B110/AJ-B75 AC adaptor.



### 2 Turn on the AC adaptor's power.

### 3 Set the unit's POWER switch to the ON position.

Check the pin signals of the external DC input socket when an external power source other than the AU-B110/AJ-B75 AC adaptor is to be used.



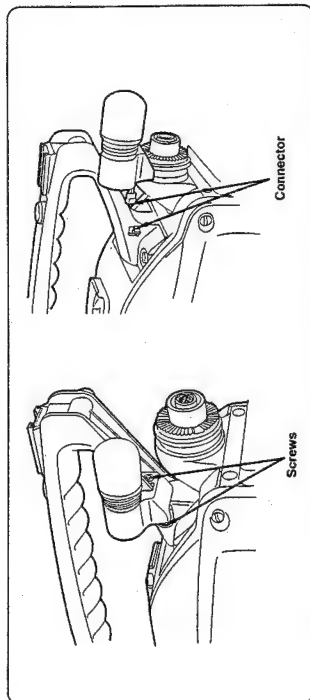
#### Notes:

- Priority is given to the power supplied from the AC adaptor when both a battery pack and AC adaptor have been connected.
- When the AC adaptor is used, the low battery warning may appear depending on the BATT.SELECT menu setting. If this happens, it is recommended that the Ni-Cd12V setting be used for BATT.SELECT.
- When the AC adaptor is used, the AC adaptor's power must be turned on before the unit's POWER switch is set to the ON position. If the POWER switch is set to ON first, the unit may malfunction since the AC adaptor's output voltage increases slowly after the power has been turned on.

## Attaching the microphone holder (option)

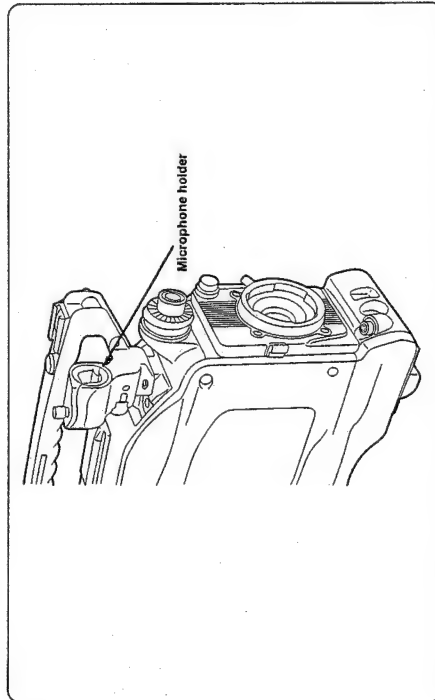
The AJ-MC700WM-L30 or other optional microphone can be used in place of the microphone which accompanies the unit.

### 1 Remove the microphone on the main unit.



Remove the two screws to remove the connector and then remove the microphone.

### 2 Attach the microphone holder.

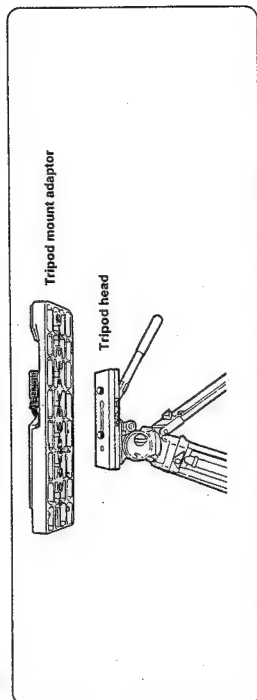


The microphone holder is attached by following the microphone removal procedure in reverse.

## Mounting the unit onto a tripod

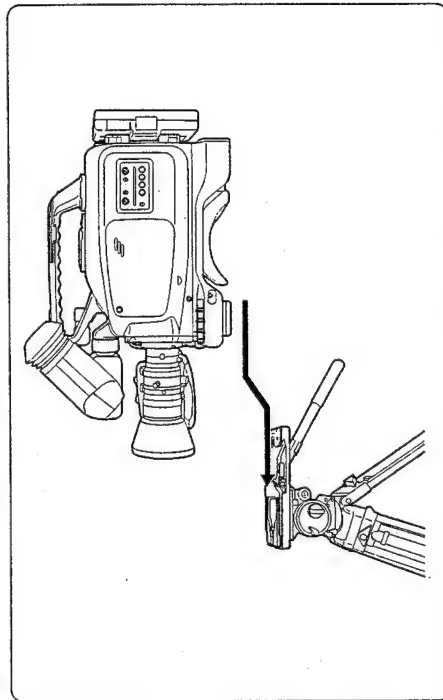
The tripod mount adaptor, which is sold separately, is used to mount the unit onto a tripod.

### 1 Attach the tripod mount adaptor to the tripod.



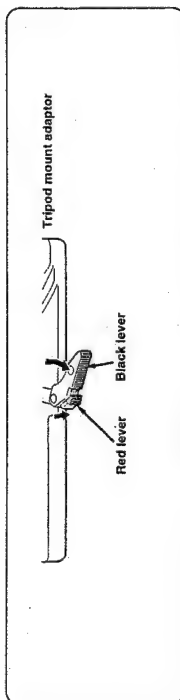
**NOTE:** Take the center of gravity of the unit and tripod mount adaptor into consideration when selecting the hole for the attachment. Also check that the diameter of the hole selected matches the diameter of the tripod head screw.

### 2 Mount the unit onto the tripod mount adaptor.



Slide the unit away from you along the groove until it clicks into position.

## Disengaging the unit from the tripod mount adaptor

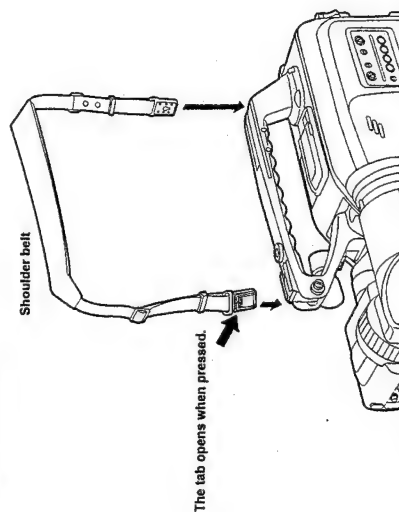


Move the black lever in the direction indicated by the arrow while holding down the red lever, and disengage the unit by sliding it toward you.

### NOTE:

If the pin of the tripod mount adaptor fails to return to its original position after the unit has been disengaged, again move the black lever in the direction indicated by the arrow while holding down the red lever. This returns the pin to its former position. Bear in mind that the unit cannot be mounted if the pin is left in the center.

## Fastening the shoulder belt (option)



To release the shoulder belt, open the tabs at both ends and disengage.



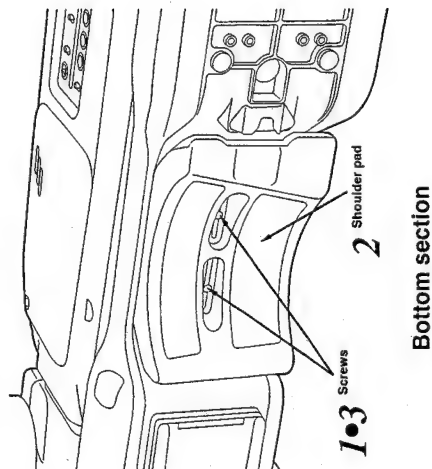
### NOTE:

Check that the shoulder belt is securely fastened.

## Adjusting the shoulder pad position

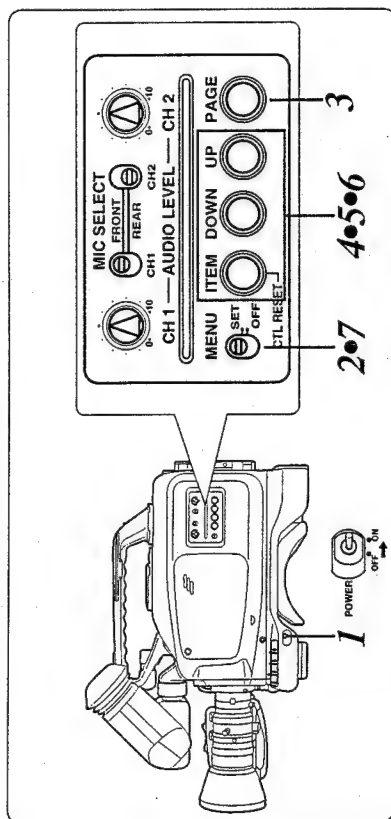
The shoulder pad can be adjusted by sliding it in the forward or backward direction from its center position (shipment position) by up to 15 mm on either side. Adjust it to the position where you find it easiest to operate.

- 1 Loosen the two screws.
- 2 Slide the shoulder pad back and forth until you find the optimum position.
- 3 Tighten the screws and secure the shoulder pad.



## ■ Setting the date and time

The first step to take after purchasing the unit is to set the date and time.  
(With a DVCPRO VTR, the shooting date and time data is recorded separately from the images. In order for this data to be recorded correctly, first set the date and time.)



- 1 Set the POWER switch to ON.
- 2 The setting screen (MENU) appears in the viewfinder when the MENU SET/OFF selector switch is set to SET.
- 3 While monitoring the viewfinder, press the PAGE button until the TIME/DATE screen appears.

### Setting screen (viewfinder)

(First setting screen for menu items)

- MAIN FUNCTION -	
→ TCG CLEAR	: REC
RECRUN/FREERUN	: DF
SCENE DATA SAVE	: DIGIT
SCENE DATA UNDEL	: ON
BATT. SELECT	
BACK TALLY	
MENU INITIALIZE	

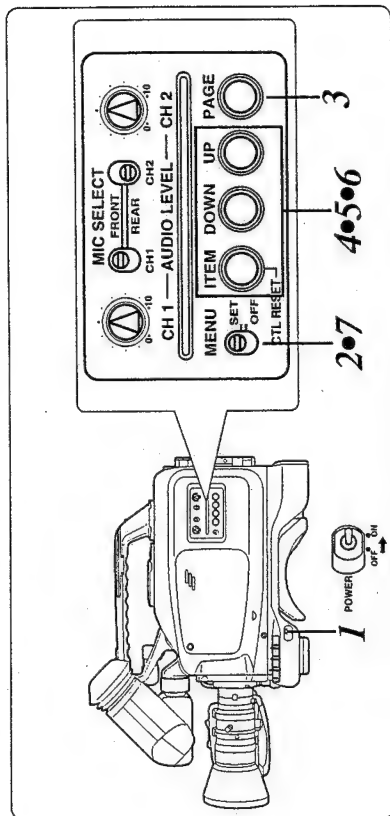
Keep pressing the PAGE button.

- TIME/DATE -	
→	
YEAR	: 97
MONTH	: 06
DAY	: 13
HOUR	: 10
MINUTE	: 02
■ TIME/DATE SET	

Descriptions are also given in the menu items (on pages 48, 49 and 54).

## ■ Setting the date and time

The first step to take after purchasing the unit is to set the date and time.  
(With a DVCPRO VTR, the shooting date and time data is recorded separately from the images. In order for this data to be recorded correctly, first set the date and time.)



- 1 Set the POWER switch to ON.
- 2 The setting screen (MENU) appears in the viewfinder when the MENU SET/OFF selector switch is set to SET.
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### Setting screen (viewfinder)

(First setting screen for menu items)

- MAIN FUNCTION -	
→ TCG CLEAR	: REC
RECRUN/FREERUN	
SCENE DATA SAVE	: DIGIT
SCENE DATA UNDEL	: ON
BATT. SELECT	
BACK TALLY	
MENU INITIALIZE	

Keep pressing the PAGE button.

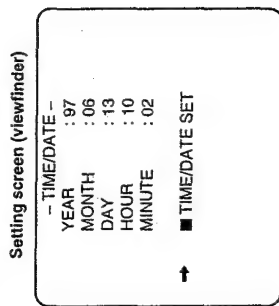
- TIME/DATE -	
→	
YEAR	: 97
MONTH	: 06
DAY	: 13
HOUR	: 10
MINUTE	: 02
■ TIME/DATE SET	

Descriptions are also given in the menu items (on pages E-49, E-50 and E-55).



4 Set the date and time using the ITEM, UP and DOWN buttons.

5 Keep pressing the ITEM button until the arrow indicates "TIME/DATE SET."

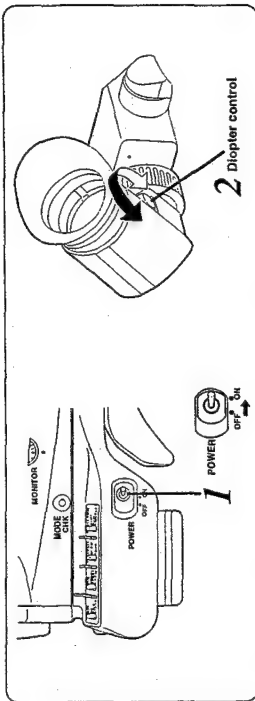


6 The date and time settings are entered when the UP or DOWN button is pressed.

7 Finally, set the MENU SET/OFF selector switch to OFF.

## ■ Adjusting the viewfinder

### Adjusting the viewfinder diopter

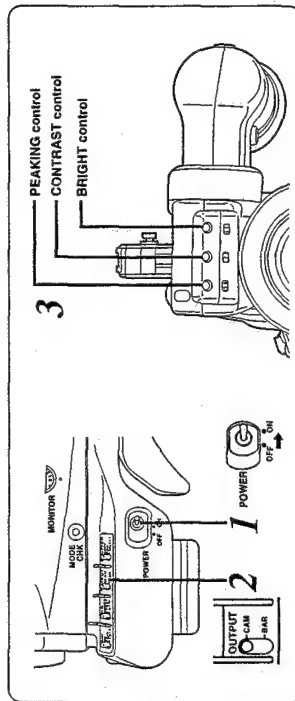


1 Set the POWER switch to ON.

An image now appears on the viewfinder.

2 Turn the diopter control and adjust it so that the viewfinder image can be seen clearly.

### Adjusting the viewfinder's brightness and contrast



1 Set the POWER switch to ON.

An image now appears on the viewfinder.

2 Set the OUTPUT switch to CAM.

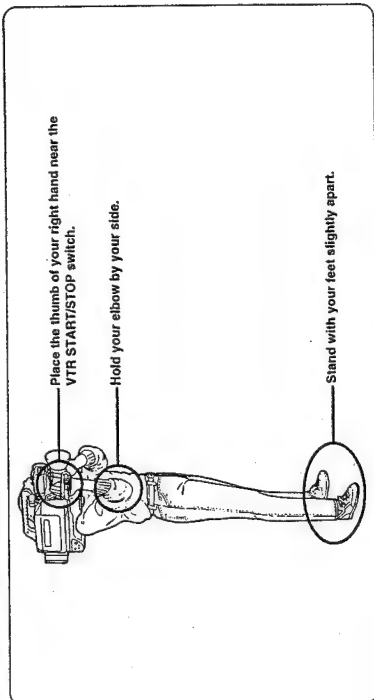
3 Turn the viewfinder's BRIGHT and CONTRAST controls and adjust the brightness and contrast of the image.

When the viewfinder's PEAKING control is turned, the image can be adjusted to be softer or sharper. If it is adjusted to be sharp, it will be easier to focus the lens.

## Adjustments during shooting

### Camera posture

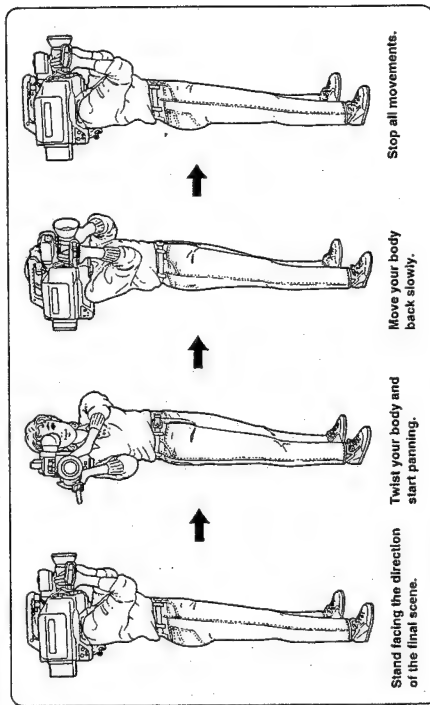
If the camera is held rather than secured on the tripod for shooting, the images will feature plenty of movement but there will be a lack of stability. Hold the camera in such a way as to prevent camera shake.



### Camera movements

Basically, the camera should be fixed in position for shooting. If the pan and tilt functions are used, however, the recording will have more of a sense of movement. Moving the camera horizontally is called "panning"; moving it perpendicularly is known as "tilting." In moving the camera, the knack is to move it slowly. Better shots can be taken by moving the camera very slowly. Even when a movement has been completed, suspend all movement for a few moments.

#### Panning

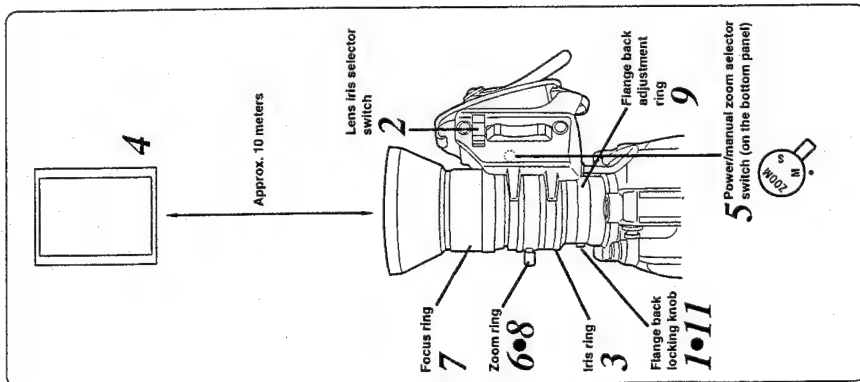


### ■ Adjusting the lens flange

The lens flange is adjusted when the lens fails to be focused at both the telephoto and wide-angle positions because it has been mounted for the first time or because it has been replaced.

This adjustment need be done only once provided that the lens is not replaced.

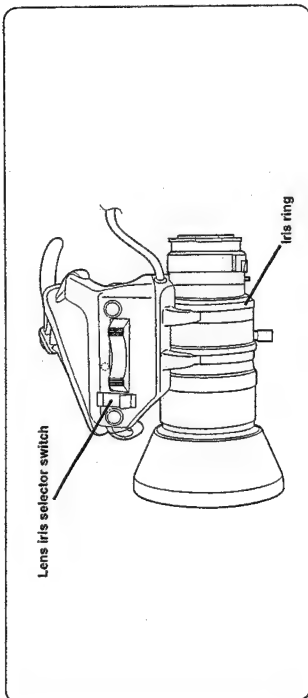
- 1 Loosen the flange back locking knob.
- 2 Set the lens iris selector switch (IRIS) to "M."
- 3 Turn the iris ring and set the iris to the fully open position.
- 4 Shoot a well-contrasted subject such as a window or utility pole at least 10 meters away.
- 5 Set the power/manual zoom selector switch to "M."
- 6 Turn the zoom ring and set the zoom to the maximum telephoto position (zoom in).
- 7 Turn the focus ring and bring the subject into focus.  
When the subject is too bright and it is hard to verify whether it is in focus: Set the electronic shutter to ON. (If necessary, change the shutter speed as well.)
- 8 Turn the zoom ring and set the zoom to the maximum wide-angle position (zoom out).
- 9 Turn the flange back adjustment ring and bring the subject into focus.
- 10 Repeat steps 5 to 9 until the subject is brought into focus at both the telephoto and wide-angle positions.
- 11 Upon completion of the adjustments, tighten up the flange back locking knob to prevent the flange back adjustment ring from moving out of position.



Also refer to the operating instructions accompanying the lens you have purchased.

## Exposure adjustment

The exposure varies according to the lens iris.  
The lens iris can be adjusted using the automatic iris or manual iris settings.



### • Automatic iris

Set the lens iris selector switch (IRIS) to "A."

The iris is automatically adjusted to obtain the brightness which is commensurate with the subject.

- This unit's automatic iris operation serves to measure the average brightness of the entire screen to control the iris. This means that the subject will tend to become all white or dark when a spotlight is directed on the subject or when the subject is shot under backlight conditions. Use the lens iris at the manual setting for lighting conditions such as these.

### • Manual iris

Set the lens iris selector switch (IRIS) to "M."

Turn the iris ring and adjust the brightness.

Shooting conditions	Operation
Background is too bright, and subject is dark (backlight)	Open the iris slightly.
Background is dimly lit, and subject is bright	Stop down the iris slightly.
When special effects are desired	Adjust the iris as required.

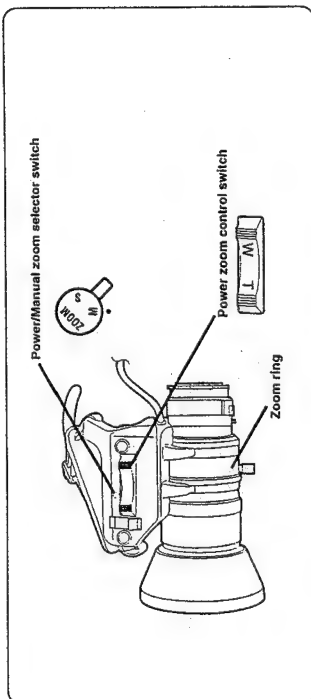
Also refer to the operating instructions accompanying the lens you have purchased.







### Note:

- Use the built-in ND filter if there is too much light.

## Zooming

Both power zoom and manual zoom functions are available for zooming.  
Power zoom involves simply pressing a switch and selecting telephoto (TELE) or wide angle (WIDE); manual zoom involves operating the zoom ring and selecting telephoto or wide angle.

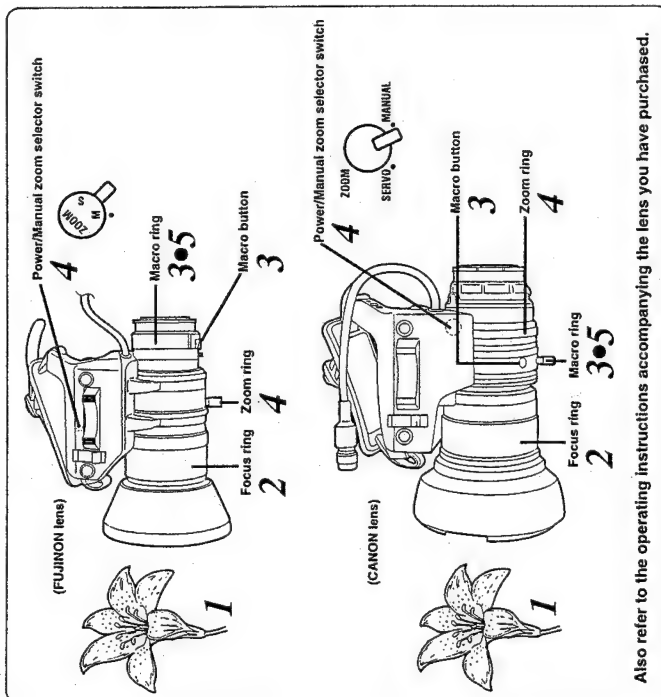


Zooming	Power zoom	Manual zoom
Telephoto	Set the power/manual zoom selector switch to "S." 	Set the power/manual zoom selector switch to "M." 
Wide angle	Set the power zoom control switch to T (TELE). 	Rotate the zoom ring downward. 
	Set the power zoom control switch to W (WIDE). 	Rotate the zoom ring upward. 

Also refer to the operating instructions accompanying the lens you have purchased.

## How to take close-ups

The close-up (macro) function comes in handy when shooting insects, flowers or other subjects positioned at close distances of up to 1 meter or so from the unit.



Also refer to the operating instructions accompanying the lens you have purchased.

**1** Bring the lens up close to the subject.

**2** Set the focus ring to the shortest possible setting.

**3** Press the MACRO button forward, and rotate the macro ring.

The subject appears at its maximum size when the macro ring is rotated as far as it will go.

**4** Set the power/manual zoom selector switch to "M," and rotate the zoom ring to bring the subject into focus.

**5** After completing the macro shooting, return the macro ring to its click-stop position.

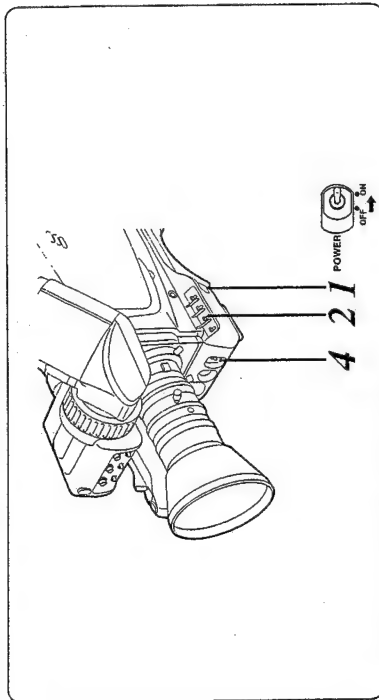
## Light sources and color temperatures

When shooting a subject, it is necessary to adjust the white balance to a setting which matches the light source. A light source is expressed using a color temperature (K). The bluer the light, the higher the temperature; conversely, the redder the light, the lower the temperature. The table given below shows the correlation between light sources and color temperatures.

Light source	Color temperature (K)
Clear skies	10,000
Cloudy	8,000
Rainy	7,000
Fluorescent lights (daylight)	6,000
Sunshine at midday	5,000
Mercury-vapor lamps	4,000
Fluorescent lights (white)	3,500
1 hour after sunrise, 1 hour before sunset	3,200
Fluorescent lights (warm white)	3,000
Studio lights	2,500
Halogen lamps, video lights	2,000
30 minutes after sunrise, 30 minutes before sunset	1,800
Incandescent bulbs	1,600
Sodium lamps	1,400
(Lighting inside tunnels)	1,200
Sunrise, sunset	1,000
Candlelight	800

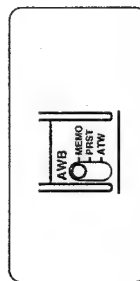
## White balance adjustment

This adjustment may be skipped when the white balance selector switch is used at the ATW position (automatic tracking wide balance mode) or PRST position (for shooting under a predetermined light source).



1 Set the POWER switch to ON.

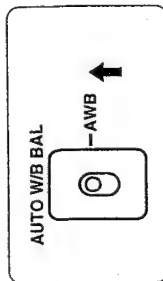
2 Set the white balance selector switch to MEMO.



3 Place a sheet of white paper, handkerchief or something similar in conditions identical to those of the light sources which will be used to illuminate the subject, and zoom in on the subject so that the screen is filled with the white paper or handkerchief.

- Something white (such as a piece of white fabric or white wall) near the subject may serve instead, but it should be borne in mind that what you thought was white may in fact be slightly coloured.
- Be careful not to open the lens iris too far when adjusting the white balance. Attempting to adjust the white balance with the iris open too far will cause the warning "TOO BRIGHT" to be displayed and processing to stop. Note that the "TOO BRIGHT" warning is especially prone to appear when the entire screen is filled with something white, such as a piece of paper.
- (Generally speaking, selecting the AUTO IRIS mode to control the lens iris setting will ensure that it is automatically adjusted to the appropriate setting for the lighting level.)

4 Shoot the white object so that it fills the screen, and set the AUTO W/B BAL switch to AWB.



The white balance adjustment is completed is about 10 seconds.

- Upon completion of the adjustment, the color temperature display appears in the viewfinder. Now check that the color temperature imaged and the color temperature displayed in the viewfinder match. If they do not tally, it is recommended that the white balance be adjusted again.
- If it was not possible to adjust the white balance, the WHITE BAL ERROR TRY AGAIN message appears in the viewfinder. In a case like this, check that the lens cable is connected properly and that the subject brightness is suitable, and then adjust the white balance again.

When the white balance should be re-adjusted:

Be absolutely sure to re-adjust the white balance when there has been a change in the light conditions or when the gain setting has been changed.

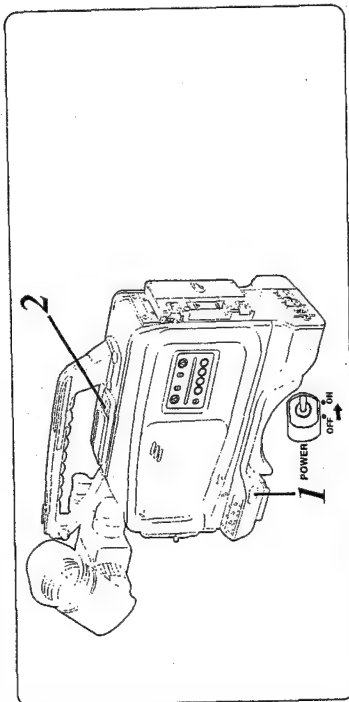
### Notes:

- Since hunting may occur when a zoom lens with an automatic iris mechanism is used, adjust the iris gain knob provided on the lens. For further details, refer to the operating instructions accompanying the lens.
- The white balance cannot be adjusted if the white balance selector switch is set to the ATW or PRST position.
- Do not allow a subject lighter than the white object shot in step 3 above onto the screen since the white balance is adjusted with the lightest part of the subject on the screen taken to be white. Failure to heed this caution may cause malfunctioning.
- Do not increase the gain to an unnecessarily high value and then proceed with the automatic white balance (AWB) operation. Failure to heed this caution will cause the iris to be nearly stopped down when AWB is performed so operation will become unstable.

### Remarks:

- In order to ensure that a high picture quality is maintained, it is recommended that AWB be performed immediately before shooting scenes of great importance or value.
- When the white balance is adjusted, the black balance is also adjusted automatically inside the unit. Consequently, when the AUTO W/B BAL switch has been operated, the iris will close before opening again: this is normal and not indicative of any malfunctioning.

## Normal recording

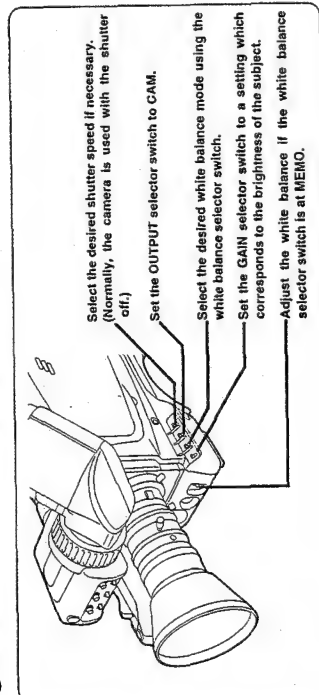


- 1 Set the POWER switch to ON.
- 2 Press the EJECT button to open the cassette holder, and insert the cassette tape.

- Before proceeding with the recording, make sure that the cassette tab has been set to the REC position.
- This unit uses "L" cassettes only.



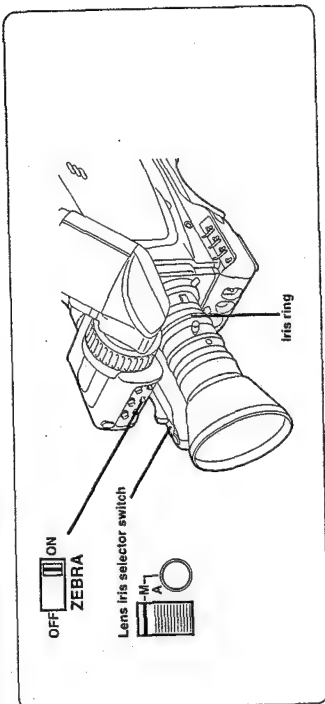
- 3 Set the camera switches as shown below.



- 4 Point the camera at the subject and adjust the focus and zoom.
- 5 Press the VTR START/STOP button to start the recording.
- 6 Press the VTR START/STOP button to stop the recording.

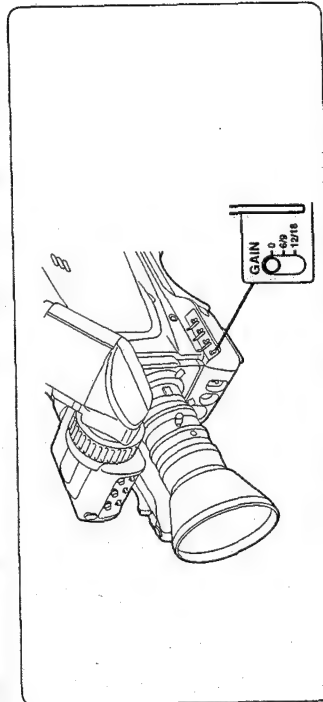
## Zebra pattern display

A zebra pattern can be displayed on a bright part (over approx. 85 IRE) of the image.



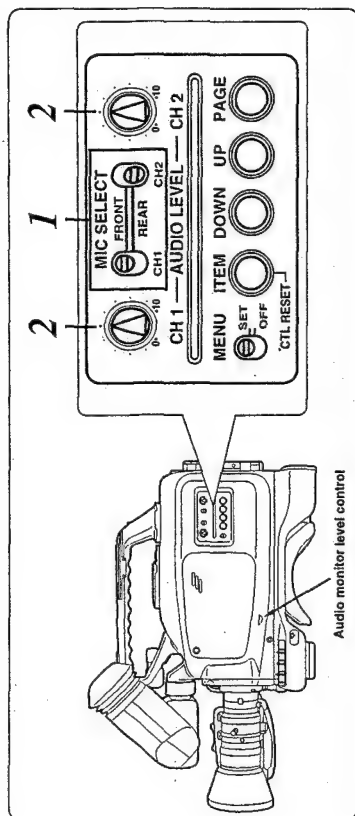
## Gain settings

When shooting in locations with insufficient lighting, a brighter image can be produced by increasing the gain. However, it should be borne in mind that the noise will also increase when the gain is raised.

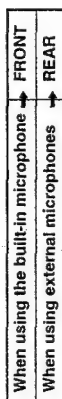


Gain settings of 0/6/12dB or 0/9/18dB are set on the menu item CAMERA SETTING menu screen for operation. (The 0/6/12dB settings were selected when the unit was shipped from the manufacturing plant.) For further details, refer to the menu items (on pages 48, 49 and 53).

## Audio recording



**1** Select the desired input signals using the audio input selector switches.



**2** Adjust the recording levels using the audio level controls.

The recording levels can be checked in the viewfinder. Adjust the levels in such a way that the audio level meter for the viewfinder display shows "-----" or thereabouts.  
(See page 15)

### Notes:

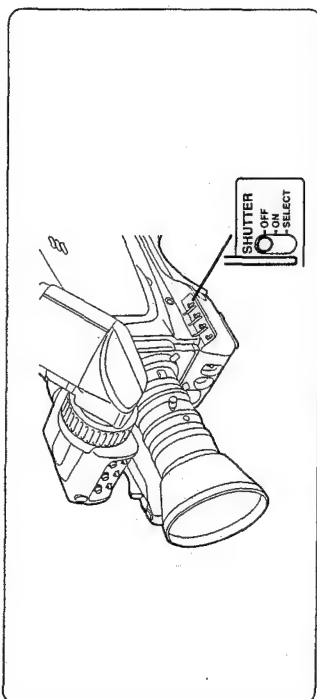
■ Howling may occur when the volume of the sound delivered through the audio monitor speaker is too high. If this occurs, turn the audio monitor level control down to a level at which howling does not occur.

### Remarks:

■ The line input can be selected instead of the external microphones by setting an internal switch to the corresponding position. For further details, refer to page 59.

## High-speed shutter

Camera shake can be minimized when shooting moving subjects by increasing the shutter speed. Furthermore, shooting under fluorescent lights produces flickering images, and this flickering can be reduced by changing the shutter speed when shooting.



### How to change the shutter speed

The SHUTTER switch is non-locking at the SELECT position. Each time it is operated at this position, the shutter speed changes in the following sequence: 1/100 → 1/125 → 1/250 → 1/500 → 1/1000 → 1/2000 → 1/4000 → 1/8000. When operated again at the 1/8000 setting, the speed returns to 1/100.

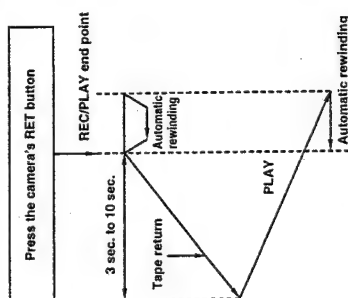
### Notes:

■ The higher the shutter speed setting, the darker the images will become. Check the brightness of the images in the viewfinder, and adjust the lighting and lens iris.

■ When shooting extremely bright subjects with the shutter speed at a high setting, the smear effect (a form of distortion in which objects appear stretched out vertically) may be more noticeable than in the shutter OFF condition: this is normal and not indicative of any malfunctioning.

## Rec review

When the camera's RET button is pressed while the VTR is in the REC PAUSE mode (which is established after the tape has finished moving back automatically), rec review is conducted so that the quality of what has already been recorded can be checked.



- The amount by which the tape moves backward can be controlled from 3 to 10 seconds by either pressing the camera's RET button and releasing it immediately or holding it down.
- The playback images appear in the viewfinder while the tape is being played back in the rec review mode.

<When no recording has yet been made near the rec review start point>  
The playback images of the blank part of the tape appear in the viewfinder.

**Notes:** ■ During the rec review operators (BNC and S-VIDEO connectors) as well as to the viewfinder.  
It should be borne in mind that these rec review images will be recorded if a back-up VTR has been connected to record back-up images.

## Retake

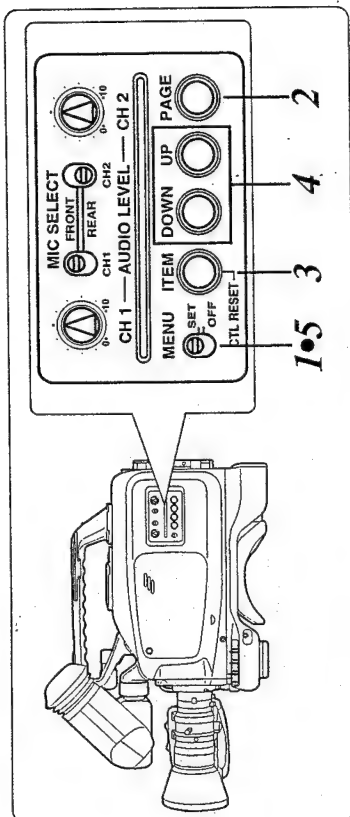
When the FF or REW button is pressed in the REC PAUSE mode, playback images at 1x normal tape speed or reverse playback images at 1x normal tape speed can be viewed while the button is held down. When the button is released, the REC PAUSE mode is re-established immediately. This function can be used to retake shots by running the tape to the desired position while checking the images and by starting recording again from that position.

## Still-picture playback

The STILL mode is established when the PLAY button is pressed during playback. Both the FF and REW LED displays in the operation section light up at this time. Normal playback is resumed when the PLAY button is pressed again.

## Menu items

### Setting procedure

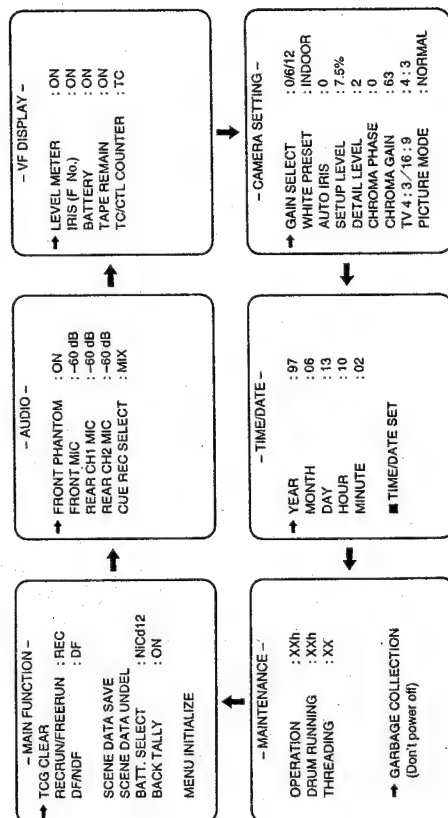


#### 1 Set the MENU SET/OFF switch to SET.

When the MENU SET/OFF switch is set to SET while the unit is in the stop, eject or rec pause mode, the menu screen is displayed.

#### 2 Press the PAGE button.

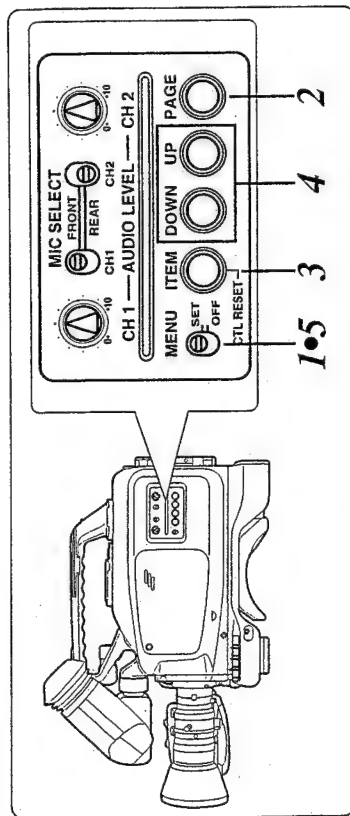
The menu screens are switched in succession as shown below by pressing the PAGE button.





## Menu items

### Setting procedure

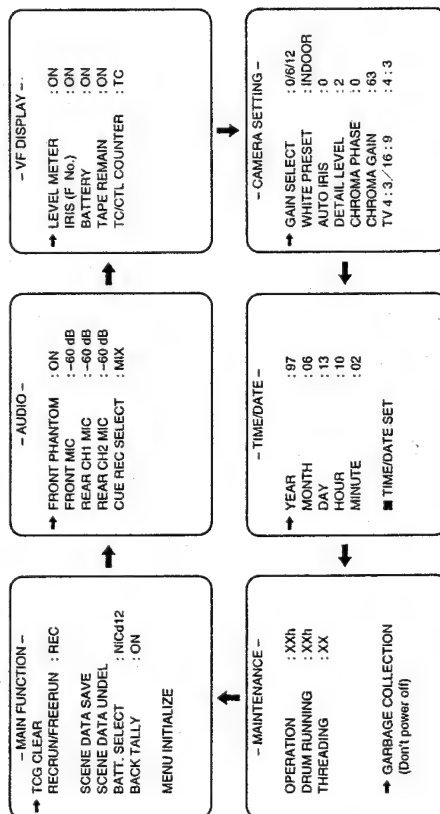


#### 1 Set the MENU SET/OFF switch to SET.

When the MENU SET/OFF switch is set to SET while the unit is in the stop, eject or rec pause mode, the menu screen is displayed.

#### 2 Press the PAGE button.

The menu screens are switched in succession as shown below by pressing the PAGE button.



#### 3 Press the ITEM button.

The ITEM button is pressed to select items on each of the menu screens. Each time the ITEM button is pressed, the arrow at the left of the screen moves. The item indicated by the arrow is the item currently selected.

#### 4 Press the UP or DOWN button.

Press the UP or DOWN button to change the setting.

#### 5 Upon completion of the settings, set the MENU SET/OFF switch to OFF.

The original viewfinder screen is restored.

**Notes:**  
The setting data is stored in the built-in flash memory several seconds after the MENU SET/OFF switch has been set to the OFF position. Bear in mind that the data will not be stored correctly if the battery or AC adaptor is removed while the MENU SET/OFF switch is still at SET or immediately after the switch was changed to the OFF setting.

## MAIN FUNCTION menu

→ MAIN FUNCTION –	
→ TCG CLEAR	: REC
RECRUN/FREERUN	: DF
SCENE DATA SAVE	
SCENE DATA UNDEL	: DIGIT
BATT. SELECT	: ON
BACK TALLY	
MENU INITIALIZE	

Menu item	Mode setting	Description of function
TCG CLEAR		Clears the time code generator.
RECRUN/FREERUN	REC. FREE	Selects whether the time code generator is to be used in the REC RUN or FREE RUN mode. Regeneration is conducted if REC RUN mode is selected.
DF/NDF	DF NDF	Selects whether the time code generator is to be operated in the drop frame or non-drop frame mode.
SCENE DATA SAVE		Stores the SCENE data on the tape. (Refer to the section on SCENE data on pages 56 and 57.)
SCENE DATA UNDEL		Restores the SCENE data. (Refer to the section on SCENE data on pages 56 and 57.)
BATT. SELECT	NICd12 NICd13 NICd14 DIGIT	Selects the type of battery to be used. NICd12: For an AC adaptor or a 12 V nickel-cadmium battery. NICd13: For a 13.2 V nickel-cadmium battery. NICd14: For a 14.4 V nickel-cadmium battery. DIGIT: For a digital nickel-cadmium battery (same for both 13.2 V and 14.4 V).
BACK TALLY	ON OFF	ON is selected if the back tally LED display is to be used; OFF is selected if it is not to be used.
MENU INITIALIZE		Restores all the menu items to the settings established before the unit was shipped from the factory.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## MAIN FUNCTION menu

→ MAIN FUNCTION –	
→ TCG CLEAR	: REC
RECRUN/FREERUN	
SCENE DATA SAVE	
SCENE DATA UNDEL	: DIGIT
BATT. SELECT	: ON
BACK TALLY	
MENU INITIALIZE	

Menu item	Mode setting	Description of function
TCG CLEAR		Clears the time code generator.
RECRUN/FREERUN	REC. FREE	Selects whether the time code generator is to be used in the REC RUN or FREE RUN mode. Regeneration is conducted if REC RUN mode is selected.
SCENE DATA SAVE		Stores the SCENE data on the tape. (Refer to the section on SCENE data on pages E-57 and E-58.)
SCENE DATA UNDEL		Restores the SCENE data. (Refer to the section on SCENE data on pages E-57 and E-58.)
BATT. SELECT	NICd12 NICd13 NICd14 DIGIT	Selects the type of battery to be used. NICd12: For an AC adaptor or a 12 V nickel-cadmium battery. NICd13: For a 13.2 V nickel-cadmium battery. NICd14: For a 14.4 V nickel-cadmium battery. DIGIT: For a digital nickel-cadmium battery (same for both 13.2 V and 14.4 V).
BACK TALLY	ON OFF	ON is selected if the back tally LED display is to be used; OFF is selected if it is not to be used.
MENU INITIALIZE		Restores all the menu items to the settings established before the unit was shipped from the factory.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## AUDIO menu

- AUDIO -	
→ FRONT PHANTOM	: ON
FRONT MIC	: -60 dB
REAR CH1 MIC	: -60 dB
REAR CH2 MIC	: -60 dB
CUE REC SELECT	: MIX

Menu item	Mode setting	Description of function
FRONT PHANTOM	<u>ON</u> OFF	Sets the phantom power for the front microphone to ON or OFF. ON is selected if the microphone provided with the unit is to be used.
FRONT MIC	-60 dB -50 dB -40 dB	Selects the front microphone input level setting. Select -60 dB, -50 dB or -40 dB depending on the microphone used.
REAR CH1 MIC	-60 dB -50 dB -40 dB	Selects the rear microphone CH1 input level setting. Select -60 dB, -50 dB or -40 dB depending on the microphone used.
REAR CH2 MIC	-60 dB -50 dB -40 dB	Selects the rear microphone CH2 input level setting. Select -60 dB, -50 dB or -40 dB depending on the microphone used.
CUE REC SELECT	CH1 CH2 <u>MIX</u>	Selects the signals to be recorded on the CUE audio track from among the CH1, CH2 and MIX signals.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## VF DISPLAY menu

- VF DISPLAY -	
→ LEVEL METER	: ON
IRIS (F No.)	: ON
BATTERY	: ON
TAPE REMAIN	: ON
TC/CTL COUNTER	: TC

Menu item	Mode setting	Description of function
LEVEL METER	<u>ON</u> OFF	Selects whether the audio level meter reading is to be displayed on the viewfinder.
IRIS (F No.)	<u>ON</u> OFF	Selects whether the lens iris f-value is to be displayed on the viewfinder.
BATTERY	<u>ON</u> OFF	Selects whether the remaining battery charge is to be displayed on the viewfinder.
TAPE REMAIN	<u>ON</u> OFF	Selects whether the remaining tape amount is to be displayed on the viewfinder.
TC/CTL COUNTER	TC <u>UB</u> CTL OFF	Selects whether the viewfinder counter display is to show the time code, user bit, CTL or none of these.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## Menu items

## CAMERA SETTING menu

→ CAMERA SETTING -

GAIN SELECT	: 06/12
WHITE PRESET	: INDOOR
AUTO IRIS	: 0
DETAIL LEVEL	: 2
CHROMA PHASE	: 0
CHROMA GAIN	: 63
TV 4:3/16:9	: 4:3

Menu item	Mode setting	Description of function
GAIN SELECT	0/6/12 0/9/18	Selects whether the 0/6/12 dB or 0/9/18 dB settings are to apply to the operation of the camera gain selector switch.
WHITE PRESET	INDOOR OUTDOOR	Selects whether OUTDOOR or INDOOR is to be set when the camera's WHITE BAL selector switch is at the PRST position.
AUTO IRIS	-3.0 : : 0 : : 3.0	Selects the target brightness of the auto iris. The brightness can be set in 0.1 increments from -3.0 to 3.0. Example: When -1.5 is selected, the iris is closed by approximately 1.5 stops from the factory setting. However, there may be a slight deviation from this value.
DETAIL LEVEL	0 : : 2 : : 16	Finely adjusts the camera detail level. Adjustment is possible from 0 to 16.
CHROMA PHASE	-32 : : : 0 : : 32	Finely adjusts the camera's chroma phase. Set the value in the + direction if the skin colour is to be made redder or in the - direction if it is to be made more yellow. Any value from -32 to 32 can be set.
CHROMA GAIN	0 : : : 63	Adjusts the camera's colour intensity. The higher the value, the greater the intensity of the colours. Any value from 0 to 63 can be set.
TV 4 : 3 / 16 : 9	4 : 3 16 : 9	Selects whether the camera is to be used for screen dimensions of 4:3 or 16:9.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## CAMERA SETTING menu

- CAMERA SETTING -	
→ GAIN SELECT	: 06/12
WHITE PRESET	: INDOOR
AUTO IRIS	: 0
SETUP LEVEL	: 7.5%
DETAIL LEVEL	: 2
CHROMA PHASE	: 0
CHROMA GAIN	: 63
TV 4:3/16:9	: 4:3
PICTURE MODE	: NORMAL

Menu Item	Mode setting	Description of function
GAIN SELECT	0/6/12 0/9/18	Selects whether the 0/6/12 dB or 0/9/18 dB settings are to apply to the operation of the camera gain selector switch.
WHITE PRESET	INDOOR OUTDOOR FLUOR	Selects whether OUTDOOR, INDOOR or FLUOR (fluorescent lighting) is to be set when the camera's WHITE BAL selector switch is at the PRST position.
AUTO IRIS	-3.0 : : 0 : : 3.0	Selects the target brightness of the auto iris. The brightness can be set in 0.1 increments from -3.0 to 3.0. Example: When -1.5 is selected, the iris is closed by approximately 1.5 stops from the factory setting. However, there may be a slight deviation from this value.
SETUP LEVEL	0% 7.5%	Selects the camera setup level. Either 0% or 7.5% is selected.
DETAIL LEVEL	0 : : 2 : : 16	Finely adjusts the camera detail level. Adjustment is possible from 0 to 16.
CHROMA PHASE	-32 : : : 0 : : 32	Finely adjusts the camera's chroma phase. Set the value in the + direction if the skin color is to be made redder or in the - direction if it is to be made more yellow. Any value from -32 to 32 can be set.
CHROMA GAIN	0 : : : 63	Adjusts the camera's color intensity. The higher the value, the greater the intensity of the colors. Any value from 0 to 63 can be set.
TV 4 : 3 / 16 : 9	4 : 3 16 : 9	Selects whether the camera is to be used for screen dimensions of 4:3 or 16:9.
PICTURE MODE	NORMAL FRAME	NORMAL is selected for ordinary shooting. At the FRAME setting, pictures have the "skipped frame" effect.

The underlining for the mode settings indicates the modes selected before the unit was shipped from the factory.

## TIME/DATE menu

TIME/DATE -

→ YEAR : 97  
MONTH : 06  
DAY : 13  
HOUR : 10  
MINUTE : 02

■ TIME/DATE SET

**Note:** Make absolutely sure that the arrow is moved to the "TIME/DATE SET" position upon completion of the setting, and then press the UP or DOWN button. The settings will not be recorded unless the UP or DOWN button is pressed at the "TIME/DATE SET" position.

Menu item	Mode setting	Description of function
YEAR	00 : 99	Sets the last two digits of the year. Examples: "97" is set for 1997, and "01" for 2001.
MONTH	01 : 12	Sets the month using two digits.
DAY	01 : 31	Sets the day using two digits.
HOURL	00 : 24	Sets the hour (24-hour mode) using two digits.
MINUTE	00 : 59	Sets the minute using two digits.

## MAINTENANCE menu

MAINTENANCE -

OPERATION : XXh  
DRUM RUNNING : XXh  
THREADING : XX

→ GARBAGE COLLECTION  
(Don't power off)

Menu item	Description of function
OPERATION	Indicates the number of hours during which power has been supplied to the unit to date.
DRUM RUNNING	Indicates the total accumulated number of hours during which the head cylinder has been operating to date.
THREADING	Indicates the number of times a tape was loaded to date.
GARBAGE COLLECTION	<p>Gives the command to collect the garbage in the built-in flash memory. If the "FLASH MEMORY EMPTY" message appears in the viewfinder when the power is turned on, align the arrow with "GARBAGE COLLECTION," and press the UP or DOWN button. Collection of garbage in the flash memory then commences.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>Once the collection of garbage in the flash memory has commenced, no operation is possible for about one minute. Upon completion of this processing, normal operation can be resumed.</li> <li>While the garbage in the flash memory is being collected, do NOT turn off the power. Also ensure that the battery has an adequate charge during this operation. If the power is cut off during the processing, the collection of the garbage in the flash memory will be discontinued and not completed properly, and this will affect subsequent operation.</li> </ul>

## SCENE data (news gathering data recording)

If SCENE data is used for future non-linear editing or other such applications, it will be possible to do the job extremely efficiently. SCENE data is an information exchange system for enhancing efficiency during editing. It operates by gathering information for editing during shooting and recording it onto the tape.

The SCENE data information consists of the following data for each cut.

Cut 1	Recording start time code	Recording stop time code	MARK
Cut 2	Recording start time code	Recording stop time code	MARK
...			
Cut 200	Recording start time code	Recording stop time code	MARK

- The recording start time code and recording stop time code are automatically written.
- MARK is written by operating buttons.
- A return is made to cut 1 when the cassette tape is replaced.
- In order to ensure frame-to-frame continuity in operation, this unit returns the tape by several frames from the position of the previous cut's recording stop, and then it starts to record the next cut (this is known as overlap recording). For this reason, the position of the SCENE data information's recording stop time code is shifted slightly from the end point of the cut recorded on the tape.

## I MARK operation

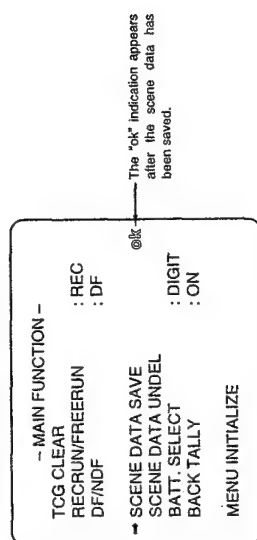
The "No MARK" status is established when recording starts. MARK is an extremely simple memo (3 types: "No MARK," "MARK 1" or "MARK 2") which is inserted during shooting to facilitate editing afterwards. Make up your own rules governing the use of these marks by, for instance, assigning "MARK 1" to one shooting session and "MARK 2" to another. When a situation arises which meets the conditions of the rules you have made up, press the MARK/CANCEL button. "MARK 1" now appears in the right corner of the viewfinder. When the MARK/CANCEL button is pressed again, "MARK 2" appears, and when the MARK/CANCEL button is pressed yet again, the CANCEL mode is established, and the "MARK" display in the right corner of the viewfinder is cleared. When the recording of the next cut is started, this "MARK" is recorded into the internal memory, and the MARK/CANCEL button may be pressed any number of times until the next recording is started.

## 2 Saving the SCENE data onto the tape

The SCENE data is saved before the tape is ejected. Normally, it is saved after the final cut has been shot.

Set the menu SET/OFF selector switch to SET and display the MAIN FUNCTION MENU.

Menu item screen (viewfinder)



Use the ITEM button to align the arrow with the SCENE DATA SAVE position, and press the UP or DOWN button. The color of the screen changes to green, and the VTR starts operating in the recording mode. It takes about 10 seconds for the SCENE data to be saved, after which the original viewfinder screen is restored and "ok" indication will appear.

- Notes:**
- Other operations cannot be performed while the SCENE data is being saved.
  - When the tape is ejected, the SCENE data stored to date is cleared, and the preparations are made to gather the SCENE data for the next tape.
  - SCENE data cannot be saved from the SAVE mode (which is automatically established to protect the tape when the unit has been left standing in the REC PAUSE mode for more than 30 minutes). In this case, first press the STOP button to release the SAVE mode, and then save the SCENE data.

**Remarks:**

- If it is absolutely essential for the data to be restored because you forgot to save it before the tape was ejected, reload the ejected tape, display the MAIN FUNCTION menu screen, and use the ITEM button to align the arrow with SCENE DATA UNDEL. The data can now be restored by pressing the UP or DOWN button. If the tape is reloaded after its ejection and recording is then started, the data will be rewritten by the SCENE data for the new tape. This means that the data cannot be restored.

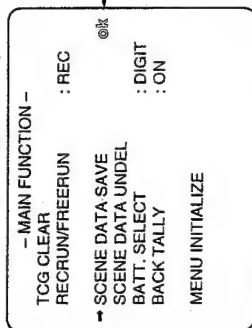
## Menu items

### 2 Saving the SCENE data onto the tape

The SCENE data is saved before the tape is ejected. Normally, it is saved after the final cut has been shot.

Set the menu SET/OFF selector switch to SET and display the MAIN FUNCTION menu.

Menu item screen (viewfinder)



Use the ITEM button to align the arrow with the SCENE DATA SAVE position, and press the UP or DOWN button. The VTR starts operating in the recording mode. It takes about 10 seconds for the SCENE data to be saved, and "ok" indication appears.

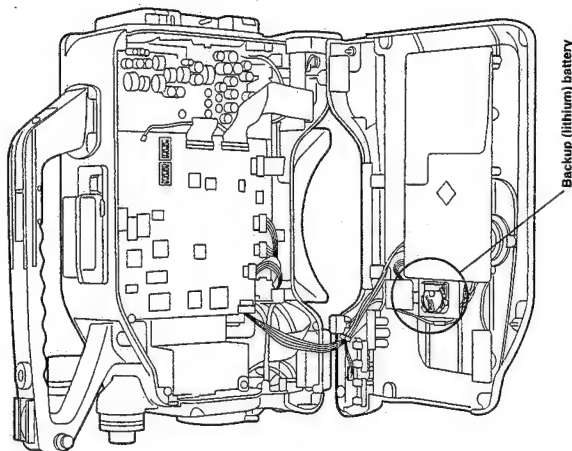
- Notes:**
- Other operations cannot be performed while the SCENE data is being saved.
  - The colors of the camera image may change while the SCENE data is being saved. This is not a malfunction. Once the SCENE data has been saved, the colors will return to their original state. Also, the camera image appears in the viewfinder and is output via the VIDEO OUT jack while the SCENE data is being saved, but an image that is completely green is recorded on the tape. This facility makes it easier during playback to find the exact position where the SCENE data was recorded.
  - When the tape is ejected, the SCENE data stored to date is cleared, and the preparations are made to gather the SCENE data for the next tape.
  - SCENE data cannot be saved from the SAVE mode (which is automatically established to protect the tape when the unit has been left standing in the REC PAUSE mode for more than 30 minutes). In this case, first press the STOP button to release the SAVE mode, and then save the SCENE data.

**Remarks:**

- If it is absolutely essential for the data to be restored because you forgot to save it before the tape was ejected, reload the ejected tape, display the MAIN FUNCTION menu screen, and use the ITEM button to align the arrow with SCENE DATA UNDEL. The data can now be restored by pressing the UP or DOWN button. If the tape is reloaded after its ejection and recording is then started, the data will be rewritten by the SCENE data for the new tape. This means that the data cannot be restored.

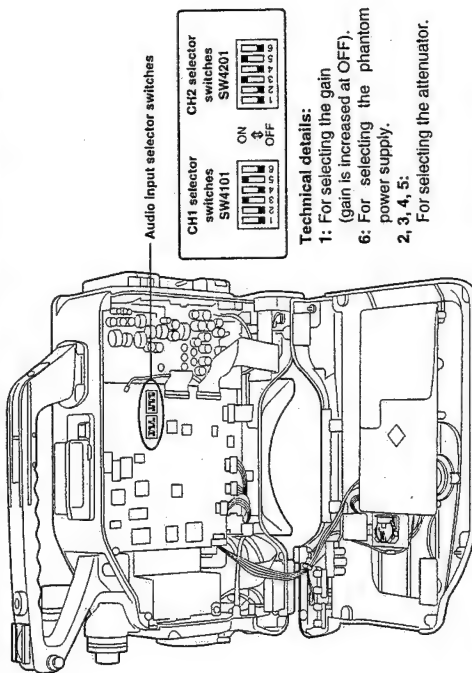
## Replacing the back-up battery

The unit is shipped from the factory with a back-up battery already installed. The "BACKUP BATTERY EMPTY" message appears in the viewfinder when the back-up battery has run down. Consult with your dealer, and replace the battery with a new one (CR2032 or BR2032).



## Selecting the audio input

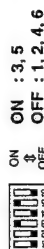
To connect phantom microphones or the line input to the audio input connectors on the rear panel, set the internal switches (audio input selector switches) to the appropriate positions.



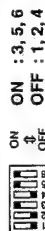
### Technical details:

- 1: For selecting the gain (gain is increased at OFF).
- 6: For selecting the phantom power supply.
- 2, 3, 4, 5: For selecting the attenuator.

When an ordinary microphone is used (factory settings):

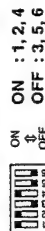


When a phantom microphone is to be used:



Set the switches to the above positions.

When the line input is to be used:



Set the switches to the above positions.

The line input level can be switched to one of three settings: -6 dB, 0 dB or +4 dB. It is set using the REAR CH1 MIC/REAR CH2 MIC menu item (on the AUDIO menu/see page 51) but the menu screen display will remain unchanged even when the internal switches are set to the positions shown above. Use the table given below as a reference to convert the input level.

Menu display	For microphone	For line input
-60 dB	-60 dB	-6 dB
-50 dB	-50 dB	0 dB
-40 dB	-40 dB	+4 dB

## Tips on lighting

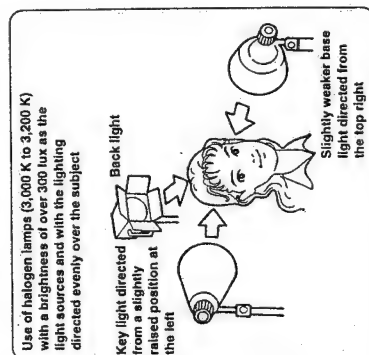
### Studio lighting

Use halogen lamps with a color temperature of 3,000K to 3,200K for lighting in a studio. If the color temperature of the light source differs from this value, the colors of the subject will appear differently to what is seen by eye. The shadows may take on colors or the image may not appear with the proper colors.

Use lighting of 300 lux or above. If it is less than this value, the screen may appear dark, the contrast may be insufficient, the depth of focus may be shallow or the picture quality may suffer deterioration in some other way.

Ensure that the lighting is directed evenly over the entire subject and that no shadows are formed.

Consult the table below and use the figures given, which are approximations only, as a guideline for evaluating the brightness.



Lighting required	Lighting desired	Lighting required
10	30	50
100	500	1,000
10,000		
100,000		
(Unit: lux)		
<ul style="list-style-type: none"> <li>Brightness of a candle at 20 cm (10 to 15)</li> <li>Brightness of a cigarette lighter at 30 cm (15)</li> <li>Brightness underneath a street lamp (50 to 100)</li> <li>Shopping arcade at night (150 to 200)</li> <li>Direct beam from a flashlight at 1 m (250)</li> <li>Indoor area lit with fluorescent lighting (400 to 500)</li> <li>Sales counters of a department store (500 to 700)</li> <li>Sunlight 1 hour before dusk on a clear day (1,000)</li> <li>Sunlight 1 hour after dawn on a cloudy day (2,000)</li> <li>By a train window in the afternoon (3,500)</li> <li>Sunlight at 10 AM on a cloudy day (25,000)</li> <li>Sunlight at noon on a cloudy day (32,000)</li> <li>Sunlight at 3 PM on a clear day (35,000)</li> <li>Sunlight at 10 AM on a clear day (65,000)</li> <li>Sunlight on a clear day (100,000)</li> <li>Outdoors at noon under a cloudless sky</li> <li>On the beach at the height of summer</li> <li>In the mountains covered with snow</li> </ul>		

### Notes:

- Do not expose the lens directly to sunlight or shoot a subject for a long time which is reflecting either a bright light or the light which is used for lighting.
- Flickering may result if the camera is used to shoot under fluorescent lights. Add extra lighting such as video lights (optional accessories) in cases like this.
- Use the built-in ND filter if there is too much light.

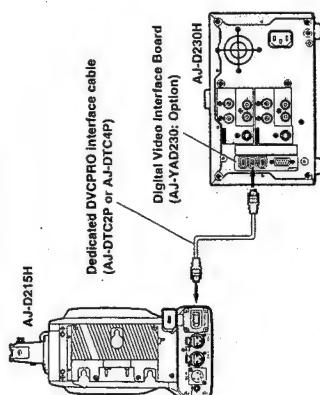


## AV signal digital transfer

By connecting it to an AJ-D230H (digital VTR) using the specified cable, it becomes possible to digitally transfer AV signals from the AJ-D215H. It then becomes possible to use it as a backup recorder for the AJ-D230H.  
(Complies with IEEE1394-1995 standard)

### Equipment connections

Use a dedicated DVCPRO interface cable (AJ-DTC2P or AJ-DTC4P) to connect the AJ-D215H to AJ-D230H. (The input/output pins on the DVCPRO interface connector are bidirectional. No distinction is made between the input and output sides.)



### Operating precautions

- Use a dedicated DVCPRO interface cable (AJ-DTC2P or AJ-DTC4P) for the connection.
- Disturbances may be caused in the AV signals by turning the connected equipment's power ON or OFF and by connecting or disconnecting the interface cable.
- It may take a few seconds for the operation of the system to stabilize when the mode is changed. Wait until the system operation has stabilized before proceeding to record.
- When recording with DVCPRO interface input signals, the recording volume level control on the AJ-D230H will not function.
- The REC command to the AJ-D230H for backup recording purposes is supported but the timing at which the AJ-D230H is set to the recording mode will be delayed by one second or so from the timing at which the AJ-D215H enters the recording mode.

## Tips on outdoor shooting

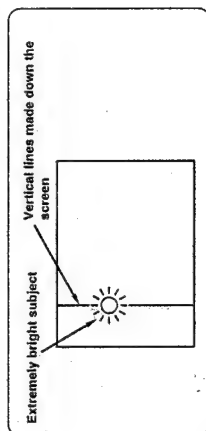
If the subject is too bright when, for instance, shooting outdoors under a clear sky, adjust the brightness either using the electronic shutter or the built-in ND filter.

## Phenomena inherent to CCD cameras

The following phenomena are known to arise in CCD cameras.

### Smear

Although this unit has extremely low smear characteristics, smear may arise when shooting an extremely bright subject.



### Flicker

Flickering may occur if fluorescent lights are used for the lighting. This is the case in areas where the commercial power line frequency is 50 Hz or when a high shutter speed is used. To prevent flicker, set the electronic shutter speed to 1/100 where the commercial power line frequency is 50 Hz and to OFF where it is 60 Hz.

### Moiré

Shooting a subject with striped patterns may give rise to the formation of Moiré patterns.

### White streaks

White streaks may appear at high temperatures. They may be more conspicuous when the gain has been increased.

### Picture roughness

Roughness in a specific pattern may appear all over the screen when the temperature is extremely high.

# AJ-D215HE

## AV signal digital transfer

### AJ-D215H VTR modes and DVCPRO interface output statuses

AJ-D215H				AJ-D230H (external VTR for recording)	
VTR mode	DVCPRO IF OUT	VIDEO OUT	AUDIO OUT	Synchronized recording mode	LOCAL mode
STOP				Key operations are acknowledged.	
FF/REW	Camera E-E output (AUDIO/VIDEO)	Camera E-E output	E-E output (AUDIO IN)		
STANDBY OFF					
PLAY	Tape output (AUDIO/VIDEO)		Tape output	Key operations are not acknowledged.	
STILL (PLAY+PLAY)					
PLAY+FF/PLAY+REW	Tape output (VIDEO)	Tape output	Sound muling		All key operations of the AJ-D230H are acknowledged regardless of the AJ-D215H VTR operation mode.
REC				Key operations are not acknowledged.	
REC PAUSE	Camera E-E output (AUDIO/VIDEO)	Camera E-E output	E-E output (AUDIO IN)	Operations are synchronized with the AJ-D215H VTR operation mode.	
EJECT				Key operations are not acknowledged. However, keys can be operated when the AJ-D215H is set to the STOP mode.	
Remarks	Use a dedicated DVCPRO interface cable.	BNC output		INPUT SELECT switch: "OPTION" position LOCAL/MENU/REMOTE switch: "REMOTE" position	INPUT SELECT switch: "OPTION" position LOCAL/MENU/REMOTE switch: "LOCAL" position

## Troubleshooting

If you suspect trouble in your unit, proceed with the inspections or adjustments described below. Consult your dealer if the trouble persists even after you have taken the remedial action suggested.

Symptom	Inspection/adjustment	Reference page no.
• The power fails to come on.	<ul style="list-style-type: none"> <li>• Check if the battery still has a sufficient charge.</li> <li>• Check if the AC adaptor has been connected securely.</li> </ul>	—
• The low battery warning is given (BATT LED or TALLY LED lights or flashes).	<ul style="list-style-type: none"> <li>• Check if the battery still has a sufficient charge.</li> <li>• Check if the battery setting menu item has been set correctly. If the AC adaptor is being used, use the NIC-D12 setting for the battery selection menu item.</li> </ul>	15, 50
• The "BACKUP BATTERY EMPTY" message appears when the power is turned on.	<ul style="list-style-type: none"> <li>• The back-up battery may have reached the end of its service life (approx. 1 year). Consult with your dealer and replace it with a new one.</li> </ul>	16, 58
• No operation results when the function buttons are pressed.	<ul style="list-style-type: none"> <li>• Check the viewfinder for error messages.</li> </ul>	16, 17
• The tape cannot be fast forwarded or rewound.	<ul style="list-style-type: none"> <li>• Check if the tape has already been fast forwarded or rewound all the way to the end or beginning of the tape.</li> </ul>	—

## Condensation

Condensation may form on the head cylinder when the unit is moved from a cold location into a warm room or when it is operated in a humid environment.

The principle behind this phenomenon is the same as when droplets of water form on the window panes of a heated room.

These droplets are called condensation. If the tape is made to travel when condensation has formed, the head cylinder and tape may be damaged.

Take the following precautions regarding condensation:

- Before inserting the cassette tape, set the power switch to ON, and check that the VTR LED or TALLY LED is not lighted or flashing and that the HUMID display is not lighted on the display panel.
- Whenever possible, avoid operating the unit in situations where condensation is likely to form.
- If the HUMID display flashes while the cassette tape is already loaded, take the following steps.

1. Turn on the power.
2. Press the EJECT button to eject the cassette tape.
3. Wait until the HUMID display stops flashing.
4. Once the HUMID display has stopped flashing, insert the cassette tape and run it.
5. Check that no trouble occurs.

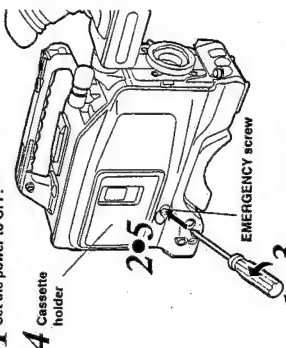
## Emergency eject

If the cassette cannot be ejected by pressing the EJECT button, use a screwdriver or similar tool to press and turn the EMERGENCY screw. This enables the cassette to be removed.

### 1 Set the power to OFF.

2 Remove the rubber cap where shown in the figure. Insert a Phillips head screwdriver into the cross-shaped part of the EMERGENCY screw (red).

1 Set the power to OFF.



- This screw needs to be rotated through about 30 turns after the first turn until the unloading can be started.
- This screw needs to be rotated through about 120 turns after the first turn until the tape is ejected.

## Maintenance

- The unit has a precision-made construction inside which is designed to deliver a high performance. Take care to conduct proper maintenance in order to keep the unit in perfect working order for many years to come. Sophisticated technology and equipment are required to replenish the oil, replace the parts or adjust the electrical components. Consult your dealer as to when these steps need to be taken.
- Failure to adhere to the maintenance and inspection routine, which involves removing the dirt and dust from inside, replenishing the lubricating oil and replacing the worn parts (such as heads), will make it impossible for the unit to produce quality pictures and proper recordings. It will also shorten the unit's service life. Ensure that the unit is maintained and inspected well ahead of time.

### Cleaning the heads

When the heads need to be cleaned, use the AJ-CL12LP cleaning cassette. Follow the handling instructions accompanying the cleaning cassette since the video heads may be damaged if it is used incorrectly.

### Cleaning the lens

- Maintain and inspect the lens once a year.
- Wiping the lens may leave scratches on it. Use an air blower or a brush with soft bristles to blow or brush away the dirt or dust which may have accumulated on the lens surface.
- If grease or fingerprints have been left on the lens, use a lens cleaner available from a camera shop, and wipe the lens starting from its center. Make circular motions and work toward the edges.

Ensure that droplets of water will not find their way to the lens when shooting in rainy or snowy conditions.

Once the lens has been removed from the camera, attach the lens cap to prevent dust and dirt accumulating on the inside of the lens.

### Cleaning the viewfinder

- Do not use paint thinners or other solvents to remove dirt on the viewfinder.
- Use a lens cleaner available from a camera store to wipe the lens.
- Under no circumstances must the mirrors be touched. Use an air blower available from a camera store to blow away any dirt or dust which may have accumulated on them.

# SECTION 2

---

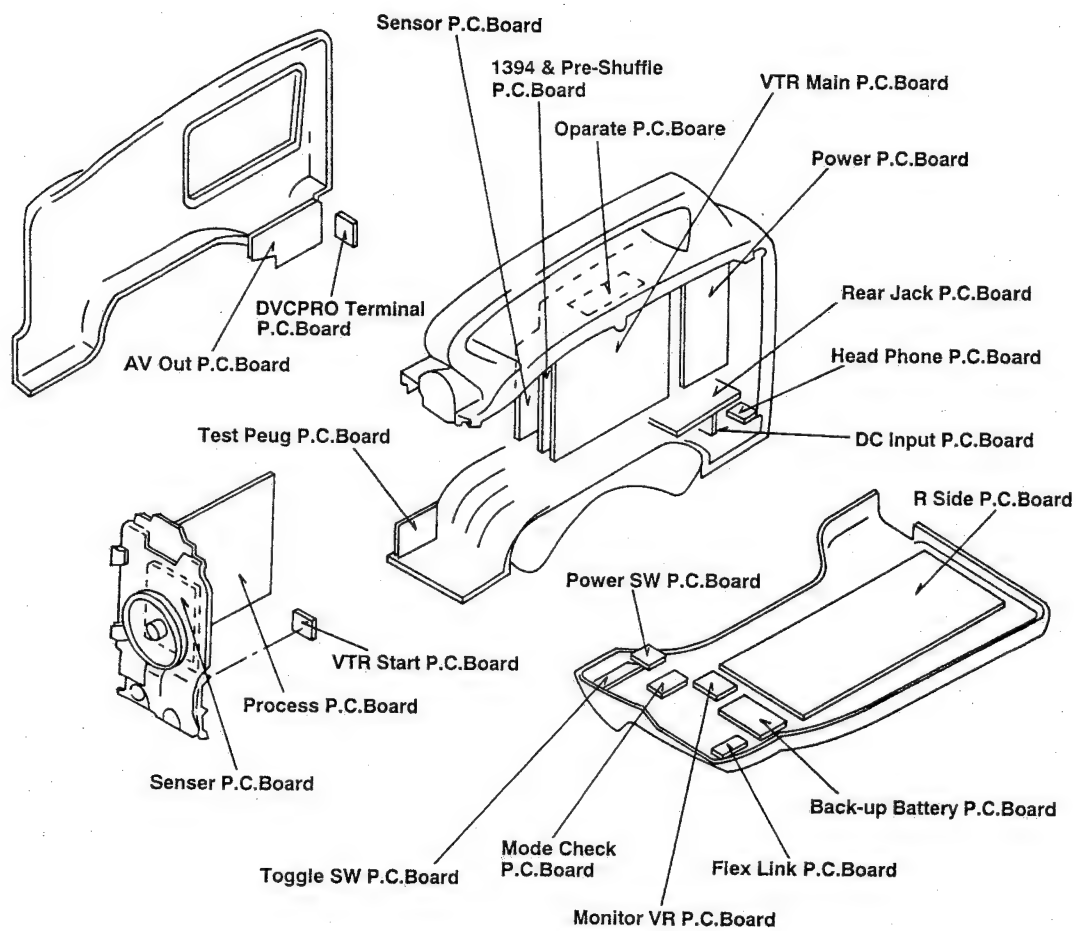
## SERVICE INFORMATION

---

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# Circuit Board Layout



## 1. Service Menu

The following menu allows service personnel for service the AJ-D200/D215.

### 1-1. Software Version Menu

Set the MENU SET/OFF switch to SET while the **UP** and **DOWN** button depressed.  
It will display Software version of System Control and servo.

### 1-2. Error Record Menu (Servo Option Menu)

Set the MENU SET/OFF switch to SET while the **UP** and **ITEM** button depressed.  
The following menu appear in the View Finder.

--- SERVO OPTION MENU ---						
CTL / ATF SELECT : ATF						
97	06	05	10	20	30	0F
00	00	00	00	00	00	00
00	00	00	00	00	00	00
00	00	00	00	00	00	00
00	00	00	00	00	00	00
①	②	③	④	⑤	⑥	⑦

#### Example

1997 June 5th AM10:20:30  
Loading Error

① Year ② Month ③ Day ④ Hour ⑤ Minute ⑥ Second ⑦ Error Code

Error Code	Error
04	Detected abnormal condition of the Brake or Pinch Solenoid.
08	Detected abnormal condition of the Cleaning Solenoid.
0F	Detected loading or unloading operation not completed less than 10 seconds.
0E	Detected Drum motor locked up for 3 seconds.
0D	Detected Capstan motor locked up for 1.5 seconds.
0C	Detected Take Up motor locked or abnormal speed condition up for 3 seconds.
0B	Detected Supply motor locked or abnormal speed condition up for 3 seconds.
FF	Detected communication error between System Control and Servo.
09	Detected serial clock communication error from Servo.
0A	Detected DEW condition.
11	Detected no Frame pulse.

### 1-3. TC/UB/CTL Set Menu

Set the MENU SET/OFF switch to SET while the **DOWN** and **PAGE** button depressed.  
The following menu appear in the View Finder.

--- TC DATA SET ---

→ HOUR : 00

MINUTE : 00

SEC : 00

FRAME : 00

■ TC DATA SET

↓ Press PAGE button.

--- UB DATA SET ---

→ HOUR : 00

MINUTE : 00

SEC : 00

FRAME : 00

■ UB DATA SET

↓ Press PAGE button.

--- CTL DATA SET ---

→ HOUR : 00

MINUTE : 00

SEC : 00

FRAME : 00

■ CTL DATA SET

↓ Press PAGE button to return TC DATA Set menu.

1. Select item by ITEM button.
2. Change data by UP or DOWN button.  
Hour : 0 ~ 23      Minute : 0 ~ 59  
Second : 0 ~ 59      Frame : 0 ~ 29
3. Select ■ TC DATA SET by ITEM button.
4. Press UP or DOWN button to set the data.  
(change flush to light)

1. Select item by ITEM button.
2. Change data by UP or DOWN button.  
Hour : 0 ~ FF      Minute : 0 ~ FF  
Second : 0 ~ FF      Frame : 0 ~ FF
3. Select ■ UB DATA SET by ITEM button.
4. Press UP or DOWN button to set the data.  
(change flush to light)

1. Select item by ITEM button.
2. Change data by UP or DOWN button.  
Hour : 0 ~ 23      Minute : 0 ~ 59  
Second : 0 ~ 59      Frame : 0 ~ 29
3. Select ■ CTL DATA SET by ITEM button.
4. Press UP or DOWN button to set the data.  
(change flush to light)

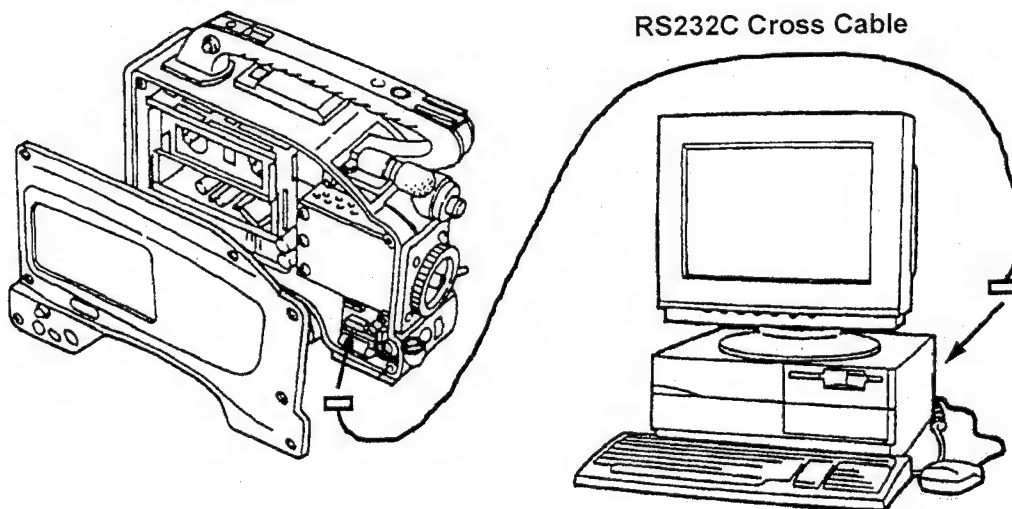
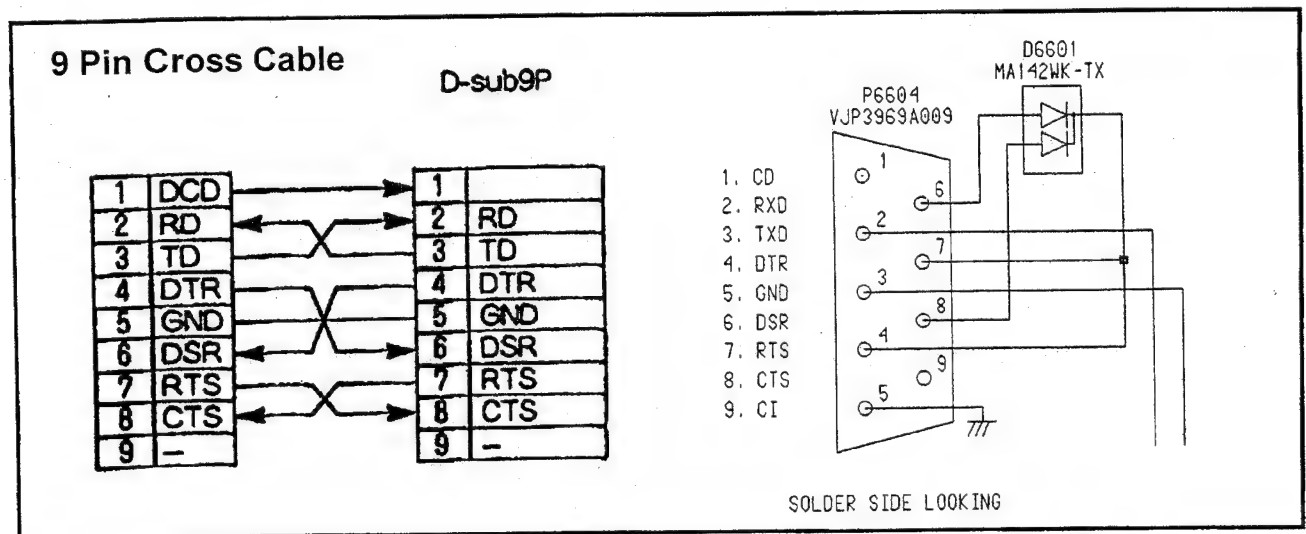
## 2. PC-EVR Adjustment Program

### 2-1. Adjustment Program Requirement

- PC-EVR Adjustment Software (VFK1340)
- Personal Computer (with WINDOWS Ver. 3.1 or WINDOWS 95)
- RS232C Cross Cable (9 Pin Female)

### 2-2. Set Up the Program & PC-EVR Connection

Install the Adjustment Program (VFK1340) floppy disk to the hard disk in personal computer. Place FD in the Floppy Disk drive and copy [VSD] holder to the Hard Disk drive (C drive). Connect the serial port of PC and P6604 of the TEST Connection C.B.A. at right side of the unit with 9 pin cross cable. (Please remove the Cassette Cover and Right Panel before perform adjustment.)





### 2-3. Start Up the Program

Type **CD VSD** and press Enter key at DOS prompt. Type **ADJVD** and press Enter key. Type **ADJVD038** then start this adjustment program and following title appears on the screen.

<< Video Recorder D223 Adjusting Program >> Ver 1.01	06-05-1997
<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"><p>MATSUSHITA Electric Industrial CO., LTD. Video System Division Production Engineering Section Copyright(C)</p><div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 60%;"><p>1. Start Adjusting D223 2. End</p></div><p>Select by cursole key and [Enter]</p></div>	

Select the **1. Start Adjusting D223** and press Enter key. Next appears **NTSC/PAL** (select **PAL**) and press Enter key.

The \* **Auto File** window appear at left bottom on screen and select **HD Read** by ↑ ↓ key and press Enter key.

<< Video Recorder D223 Adjusting Program >> Ver 1.01		06-05-1997																								
NTSC	File :	Sub Title :																								
Send : Answer :		Mode : All Steps																								
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 40%;">Item</th><th style="width: 40%;">Send Words</th><th style="width: 20%;">Goto</th></tr></thead><tbody><tr><td>1)</td><td></td><td></td></tr><tr><td>2)</td><td></td><td></td></tr><tr><td>3)</td><td></td><td></td></tr><tr><td>4)</td><td></td><td></td></tr><tr><td>5)</td><td></td><td></td></tr><tr><td>6)</td><td></td><td></td></tr><tr><td>7)</td><td></td><td></td></tr></tbody></table>			Item	Send Words	Goto	1)			2)			3)			4)			5)			6)			7)		
Item	Send Words	Goto																								
1)																										
2)																										
3)																										
4)																										
5)																										
6)																										
7)																										
<div style="border: 1px solid black; padding: 5px; width: 150px; float: left;"><p>* Auto File HD Read Save Delete FD Read Save Delete esc</p></div>																										
<div style="display: flex; justify-content: space-between;"><span>1 file</span><span>2 edit</span><span>3 DLoad</span><span>4</span><span>5 Mode</span><span>6 Direct</span><span>7 Home</span><span>8 End</span><span>9</span><span>10 Quit</span></div>																										

The <Select File to Read> window appear and select **Sub\_Title** refer to each adjustment procedure by ↑ ↓ key and press Enter key.

<< Video Recorder D223 Adjusting Program >> Ver 1.01 06-06-1997

NTSC File : Sub Title :

Send : Answer : Mode : 1 Step

< Select File to Read > [ 1 ]

Item	[File]	[Sub Title]
1)	1. VSUB CUR	VSUB CUR ADJUSTMENT
2)	2. C_GAIN	CAMERA_GAIN_ADJUSTMENT
3)	3. WBPSET32	WB_PRE-SET_ADJUSTMENT
4)	4. ATW31WB	ATW : WB_ADJUSTMENT
5)	5. ATWDATA	ATW : WB_DATA_ADJUSTMENT
6)	6. ATWSOS	ATW : SENSOR_ADJUSTMENT
7)	7. VIDEO1	VIDEO ADJUSTMENT 1
8)	8. VIDEO2	VIDEO ADJUSTMENT 2
9)	9. VIDEO3	VIDEO ADJUSTMENT 3
10)	10. ESC	

1 file 2 edit 3 DLoad 4 5 Mode 6 Direct 7 Home 8 End 9 10 Quit

Move to other **Sub\_Title**, press **F1 (File)** key after completed adjustment it will appear **\*Auto File** window and select HD Read. Therefore <Select File to Read> window appear again.

The <Interactive Adjustment> window will appear when selected adjustment item as following. Press ↑ ↓ key to change value of data, then press Enter and ESC key write data in EEPROM.

<< Video Recorder D223 Adjusting Program >> Ver 1.01 06-05-1997

NTSC File : VIDEO1 Sub Title : VIDEO ADJUSTMENT 1

Send : Y\_LEVEL= Answer : Mode : 1 Step

Item	Send Words	Goto
1) AUDIO VCO	AUDIO VCO =	
2) Y_OUT_LEVEL_ADJUSTMENT	Y_LEVEL =	
3) BURST_LEVEL		
4) SCH_PHASE		
5) ZEBRA_ADJUST		

< Interactive Adujstment >

Send Y\_level = 128

Answer Y\_level = [ 128\_ ]

Volume : [(shift) up] - / + [(shift) down]

Send : Direct Input &[ Enter ]

&[F1, SP ]( : Goto pass)

Esc : [Esc]

1 pass 2 3 4 5 6 7 8 9 10 exit

After pressed ESC key the following window appear on screen. **Do you stop the following Adjustment?** if want to go next item : select **Continue** and press Enter key. If want to Exit : select **Stop** and press Enter key.

<< Video Recorder D223 Adjusting Program >> Ver 1.01		06-05-1997																																																
NTSC	File : VIDEO1	Sub Title : VIDEO ADJUSTMENT 1																																																
Send : Y_LEVEL= Answer:		Mode : 1 Step																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Item</th> <th style="text-align: left;">Send Words</th> <th style="text-align: left;">Goto</th> </tr> </thead> <tbody> <tr> <td>1) AUDIO VCO</td> <td>AUDIO VCO =</td> <td></td> </tr> <tr> <td>2) Y OUT LEVEL ADJUSTMENT</td> <td>Y_LEVEL =</td> <td>■</td> </tr> <tr> <td>3) BURST LEVEL</td> <td></td> <td></td> </tr> <tr> <td>4) SCH_PHASE</td> <td></td> <td></td> </tr> <tr> <td>5) ZEBRA_AJU</td> <td></td> <td></td> </tr> <tr><td>6)</td><td></td><td></td></tr> <tr><td>7)</td><td></td><td></td></tr> <tr><td>8)</td><td></td><td></td></tr> <tr><td>9)</td><td></td><td></td></tr> <tr><td>10)</td><td></td><td></td></tr> <tr><td>11)</td><td></td><td></td></tr> <tr><td>12)</td><td></td><td></td></tr> <tr><td>13)</td><td></td><td></td></tr> <tr><td>14)</td><td></td><td></td></tr> <tr><td>15)</td><td></td><td></td></tr> </tbody> </table>	Item	Send Words	Goto	1) AUDIO VCO	AUDIO VCO =		2) Y OUT LEVEL ADJUSTMENT	Y_LEVEL =	■	3) BURST LEVEL			4) SCH_PHASE			5) ZEBRA_AJU			6)			7)			8)			9)			10)			11)			12)			13)			14)			15)			<div style="border: 2px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center; font-weight: bold;">Do you stop the following Adjustment?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span>Send</span> <span>Continue</span> </div> </div>	
Item	Send Words	Goto																																																
1) AUDIO VCO	AUDIO VCO =																																																	
2) Y OUT LEVEL ADJUSTMENT	Y_LEVEL =	■																																																
3) BURST LEVEL																																																		
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13)																																																		
14)																																																		
15)																																																		
<div style="display: flex; justify-content: space-between; padding: 5px;"> <span>1 pass</span> <span>2</span> <span>3</span> <span>4</span> <span>5</span> <span>6</span> <span>7</span> <span>8</span> <span>9</span> <span>10 exit</span> </div>																																																		

### Direct Command List

Command	Contents
DIAGNOSIS	Inquire of the Return Operation Hours, and Syscon & Servo soft versions.
ADJMODE	Inquire of the Servo mode setting (Servo mode, Conceal, ECC and Dolby)
SETUPMENU	Inquire of the Menu set up.
INITIALIZE=OPERATION	Clear of the Operation hours.
INITIALIZE=DRUM_RUNNING	Clear of the Drum rotation hours.
INITIALIZE=THREADING	Clear of the Loading times.
INITIALIZE=MENU	Initialize the Menu to the Factory default setting.
SYNC	Force the adjustment data write into the Flush-memory.
CONCEAL=ON	Conceal ON
CONCEAL=OFF	Conceal OFF
INNERECC=ON	Inner ECC ON
INNERECC=OFF	Inner ECC OFF
OUTERECC=ON	Outer ECC ON
OUTERECC=OFF	Outer ECC OFF
DOLBY=ON	Dolby ON
DOLBY=OFF	Dolby OFF

## 2-4 Direct Command operation

Press **F6 (Direct)**, <Direct adjustment> window appear on screen as shown in below.

Example: Type **diagnosis** and press Enter key. Therefore appear return data from unit.

<< Video Recorder D223 Adjusting Program >> Ver 1.01		06-05-1997
NTSC	File :	Sub Title :
Send : Diagnosis Answer :		Mode : 1 Step
Item	Send Words	Goto
1)		
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
<div style="border: 1px solid black; padding: 10px; text-align: center;"><p>&lt; direct Adjustment &gt;</p><p>Send [diagnosis_ ]</p><p>[Enter] : Send      [F1][SP] : Send &amp; Goto pass [Esc] : Cancel</p></div>		
1 file 2 edit 3 DLoad 4 5 Mode 6 Direct 7 Home 8 End 9 10 Quit		

Example : <VTR Setting> shows Serial No., Operation hours, Drum rotation hours, Loading threading time and System Control & Servo processor version.

<< Video Recorder D223 Adjusting Program >> Ver 1.01		06-05-1997
NTSC	File :	Sub Title :
Send : diagnosis Answer :		Mode : 1 Step
Item	Send Words	Goto
1)		
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
<div style="border: 1px solid black; padding: 10px; text-align: center;"><p>&lt; VTR Setting &gt;</p><p>Query : diagnosis Answer hit any key</p><div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;">Serial No. = AJ-D200 PL_T5 OPERATION = 8110 DRUM_RUNNING = 367 THREDDING = 94 SYSCON_ver = 0.00 Rev 0.00 SERVO_ver = 0.10 Rev 0.00</div></div>		
1 file 2 edit 3 DLoad 4 5 Mode 6 Direct 7 Home 8 End 9 10 Quit		

### 3. 232C Communication Software

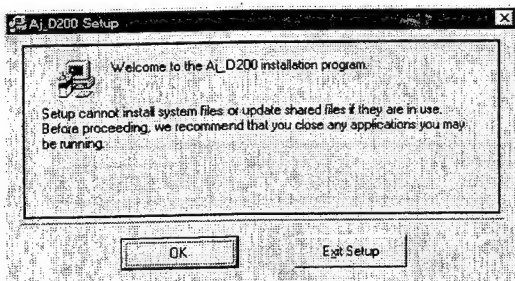
#### Part No. VFK1425

This software used read or write the Adjustment and Menu setting data between the personal computer and the AJ-D200 or AJ-D215.

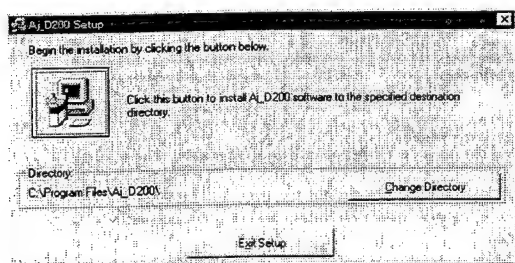
#### 3-1. INSTALLATION

This software has three floppy disks.  
(Windows95 is required)

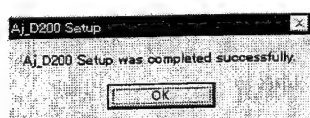
- ① Inset the SETUP Disk1 to the Drive A: (Floppy Disk Drive).
- ② Select A: Drive on the Explore, and double click the [Setup] file then the file initialize window will be displayed.
- ③ Change the Setup Disk2 when [Please insert the disk labeled 'Disk 2'....] window displayed.
- ④ Click the OK button when [Welcome to the AJ-D200 installation program] window displayed.



- ⑤ Click the Computer picture button in the installation start [Begin the installation by....] window, the setup system will proceed to load the files to Aj\_D200 folder under the Program Files in the C: Drive.

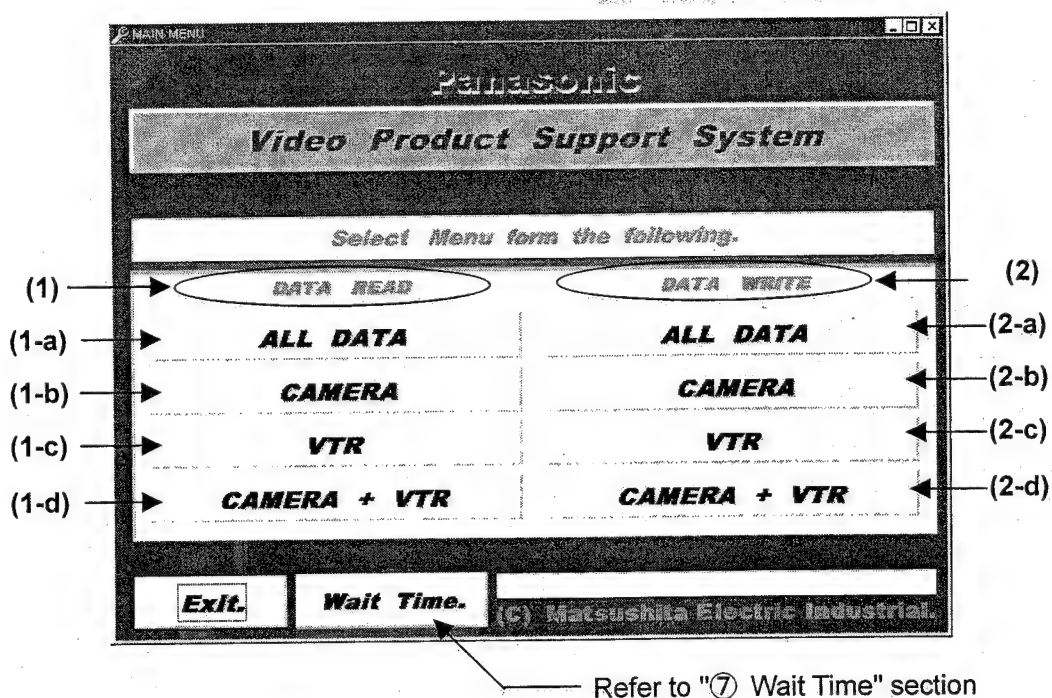


- ⑥ Change the Setup Disk3 when [Please insert the disk labeled 'Disk 3'....] window displayed.
- ⑦ Click the OK button in the [ Aj\_D200 Setup was completed successfully] window.



### 3-2. Operation

- ① Click the Start button on the Windows95 taskbar, and select Program→Aj-D200 then click it, the Communication software will be start-up.
- ② Select the Serial Port of the connected 9pin cable on the PC in the 「Select Serial Port」 window.
- ③ Main Menu is displayed as below.



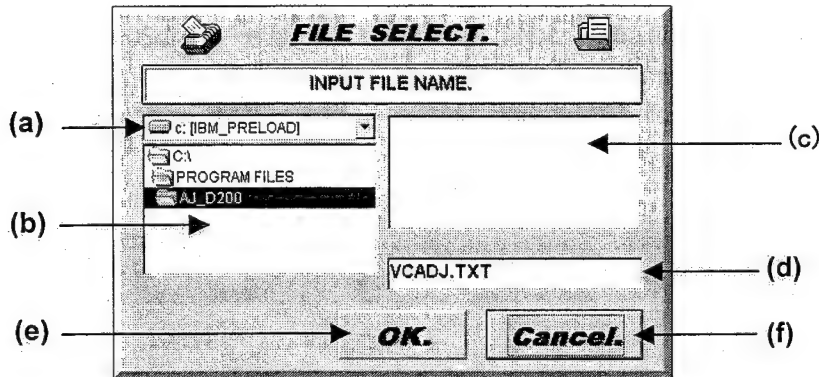
#### (1) DATA READ

- (1-a) : Store the All adjustment and Menu setting data from the AJ-D200 to the PC.
- (1-b) : Store the Camera adjustment data from the AJ-D200 to the PC.
- (1-c) : Store the VTR adjustment data from the AJ-D200 to the PC.
- (1-b) : Store the Camera and VTR adjustment data from the AJ-D200 to the PC.

#### (2) DATA WRITE

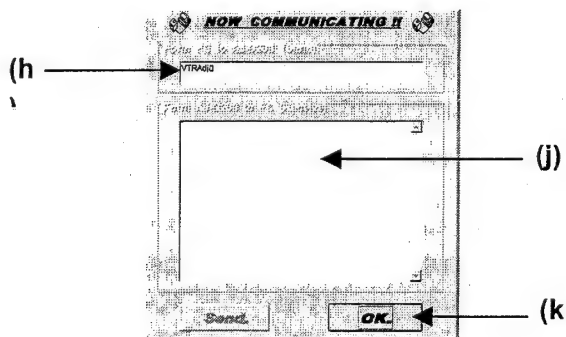
- (2-a) : Write the All adj. and Menu setting data from the PC file to the AJ-D200.
- (2-b) : Write the Camera adjustment data from the PC file to the AJ-D200.
- (2-c) : Write the VTR adjustment data from the PC file to the AJ-D200.
- (2-b) : Write the Camera and VTR adjustment data from the PC file to the AJ-D200.

④ **FILE SELECT window**: After selected the item of DATA READ or DATA WRITE.



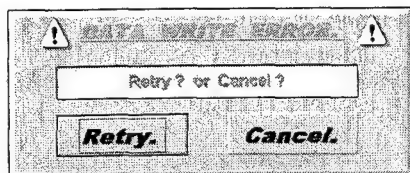
- (a): Drive List Box ⇒ Selection of the Drive to save or read file.
- (b): Directory List Box ⇒ Selection of the Directory to save or read file.
- (c): File List Box ⇒ Selection of the file.  
 ※ Default file name (ordinary set file name as below)  
 ALL DATA: ALLDATA. TXT  
 CAMERA: CAMADJ. TXT  
 VTR: VTRADJ. TXT  
 CAMERA+VTR: VCADJ. TXT
- (d): File Text Box ⇒ Input the file name.  
 ※ Type "\*.TXT" in this box, when read a file except for default set.
- (e): OK button ⇒ Fix the Read or Write file name and proceed the file checking.
- (f): Cancel button ⇒ Invalidate the selected file, then back to the Main Menu.

⑤ **COMMUNICATION PROCESS window**: After clicked the OK button as shown in above (f).



- (h): If selected items on the DATA WRITE side, displayed command and sends data to the AJ-D200.
- (j): If selected item on the DATA READ side, displayed receives data from the AJ-D200.
- (k): [STOP] is displayed during transmission, and click the this button will be interrupt the transmission process. After completed transmission, displayed change to [OK] and click it to back the Main Menu.

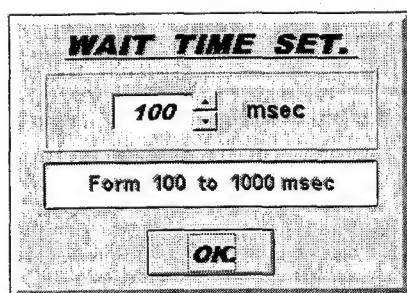
- ⑥ **COMMUNICATION ERROR window:** The Data Write Error window displayed when unmatched the send data in the PC and received data of the AJ-D200 during data file writing process.



**Retry.:** Re-send the data.

**Cancel:** Back to Main Menu.

- ⑦ **WAIT TIME SET window:** Be able to set a waiting time between data line and next data line. Setting value is 100ms~1000ms (default set 100ms).



※If data write error appear, try to increase the wait time.



### 3-3. Flash ROM Version-up

The all data should be store in a file when perform version-up for the Flash ROM. This ROMWRITER software will delete all data in the Flash ROM.

1. Click the **Start** button on the Windows95 taskbar, and select Program→Aj-D200 then click it, the Communication software will be start-up.
2. Select "ALL DATA" in the "DATA READ" side and save the adjustment and menu data to the PC.
3. Turn OFF the unit, open the left side panel and set the SW1 to WRITE side on the MAIN C.B.A..
4. Turn ON the unit, confirm the three LED are light on in the View Finder.
5. Start-up the Flash ROM writer software (VFK1248A).
  - 1) Open the VFK1248A folder with explore.
  - 2) Double click the VSI2312A application file.
6. Set communication set-up in the Setup Panel as shown in below, then click **OK** button.

TARGET MACH. ID CHECK: On, Type "D223"

TARGET FILE NAME: Click Browse... button and select new software \*.MOT.

Port: COM1 or COM2 Baud Rate: 56000

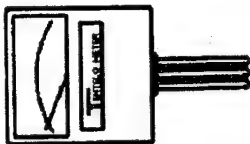

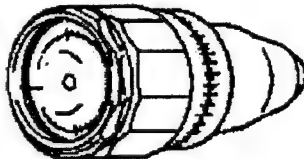



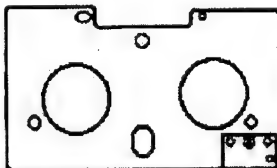







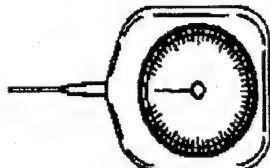






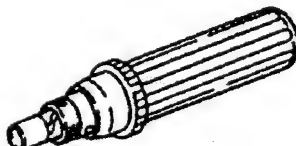
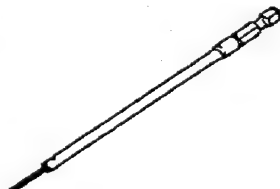
Stop Bit: 1Bit Byte Size: 8Bit


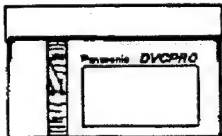
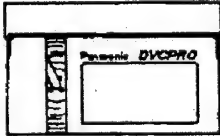
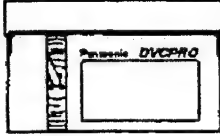

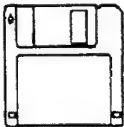


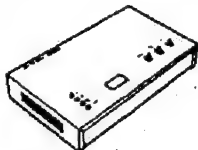

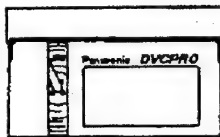
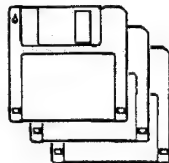
Parity: None Main Panel: Full size check

7. Click the **Start** button to load a software.
8. After completed loading, turn OFF the unit and set the SW1 to **NORMAL** side.
9. Turn ON the unit and start-up the communication soft again.
10. Select "ALL DATA" in the "DATA READ" side, and write the saved data to the AJ-D200.

#### 4. Tool List

Fig	ITEM	PART No.	JIG & EQUIPMENT	AJ-D700	AJ-D230	Remark
1	Jig Tool	VFK1145	Back Tension Meter (T2-M30-P)	yes	yes	
2		VFK1149	Post Driver	yes	yes	
3		VFK71	Dial Torque Gauge(150g)	yes	yes	
4		VFK1191	Dial Torque Gauge(45g)	yes	yes	
5		VFK1152	Dial Torque Gauge Adaptor	yes	yes	
6		VFK0357	Eccentric Screwdriver(1.5)	yes	yes	
7		VFK1154	Post Height Fixture	yes	yes	
8		VFK1348	Mech. Neutral Plate (Post)	no	yes	
9		VFK0906	High Quality Oil	yes	yes	
10		VFK1155	Neutral Position Tool (Gold)	yes	yes	
11		VFK1156	Neutral Position Tool (Black)	yes	yes	
12		VFK1208	Neutral Position Tool (Black w/Hole)	yes	yes	
13		VFK1150	Nut Driver (5.5mm)	yes	yes	
14		VFK1151	Nut Driver(2.5mm)	yes	yes	
15		VFK1188	Dial Tension Gauge (30g)	yes	yes	
16		VFK0948	Check Light	yes	yes	
17		VFK0749	Froiral Grease (for plastic)	yes	yes	
18		MOR265	Morlytone Grease (for metal)	yes	yes	
19		VFK1146	Philips Driver (Fine)(00-75)	yes	yes	
20		VFK1147	Philips Driver (Fine)(0-100)	yes	yes	
21		VFK1148	Hex. Driver (1.5)	yes	yes	
22		VFK1178	Hex. Driver (0.89)	yes	yes	
23		VFK1179	Hex. Driver (0.71)	yes	yes	
24		VFK1190	HEX. Wrench	yes	yes	
25		VFK1209	Torque Driver (0.4-3Kg)	yes	yes	
26		VFK0912	Post Axis Driver (1.5mm)	yes	yes	
27		DAQ-12	A/D Board	yes	yes	Purchase locally
28		VFM3580KL	Alignment Tape (No.1)	no	yes	(NTSC only)
29		VFM3581KL	Alignment Tape (No.2)	no	yes	(NTSC only)
30		VFM3582KL	Alignment Tape (No.3)	no	yes	(NTSC only)
31		VFM3680KL	Alignment Tape (No.1)	no	yes	(PAL only)
32		VFM3681KL	Alignment Tape (No.2)	no	yes	(PAL only)
33		VFM3682KL	Alignment Tape (No.3)	no	yes	(PAL only)
34		AJ-CL12LP	Cleaning Tape	no	yes	SALES
35		VFK1159	LISTA Software	yes	yes	
36		VFK1186	LISTA CABLE	yes	yes	
37		VFK1340	PC-EVR Adjustment Software	no	Ok	(PAL only)
38		VFK1341	CC Filter (LB40)	no	Ok	
39		VFK1342	CC Filter (LB80)	no	Ok	(NTSC only)
40		VFK1343	CC Filter (LA40)	no	Ok	(PAL only)
41		VFK1347	CC Filter (LB120)	no	Ok	
42		VFK1345	CC Filter Holder	no	Ok	
43		VFK1346	CC Filter Holder Step Down Ring	no	Ok	
44		VFK1158	B.E.R. Counter Tool	yes	Ok	
45		VFK1185	B.E.R. Counter Cable	yes	Ok	
46		VFK1248A	Flush ROM Version-Up Software	no	yes	
47		---	9 Pin Reverse (Cross) Cable	no	yes	Purchase locally
48		VFK1423	Tape Sensor Cassette	no	yes	
49		VFK1425	RS232C Comm. Software	no	no	

1	VFK1145 Back Tension Meter	2	VFK1149 Post Driver	3 4	VFK71(150g) VFK1191(45g) Dial Torque Gauge	5	VFK1152 Dial Torque Gauge Adapter
 Model : T2-M30-P							
6	VFK0357(ø1.5) Eccentric Screwdriver	7	VFK1154 Post Height Fixture	8	VFK1348 Mech Neutral Plate(Post)	9	VFK0906 High Quality Oil
							
10 11 12	VFK1155(REV, Gold) VFK1156(PLAY, Black) VFK1208(Neutral, Black With hole)	13	VFK1150 Nut Driver(5.5mm)	14	VFK1151 Nut Driver(2.5mm)	15	VFK1188(30g) Dial Tension Gauge
 (Gold)  (Black)		  5.5mm		  2.5mm			
16	VFK0948(or purchase locally) Check Light	17	VFK0749 Froiral Grease(White) (for plastic part)	18	MOR265 Morlytone Grease(Black) (for metal part)	19 20	VFK1146(00 x 75) VFK1147(0 x 100) Phillips Driver
							
21 22 23	VFK1148(1.5mm) VFK1178(0.89mm) VFK1179(0.71mm) Hex. Driver	24	VFK1190(1.5mm) Hex. Wrench	25	VFK1209 Torque Driver(0.4-3Kg)	26	VFK0912 Post Axis Driver(1.5mm)
							

<p>27 DAQ-12 A/D Converter Board (For Quatech. Purchase Locally)</p> 	<p>28 VFM3580KL 29 VFM3581KL 30 VFM3582KL DVC PRO Alignment Tape (L cassette)</p> 	<p>31 VFM3680KL 32 VFM3681KL 33 VFM3682KL DVC PRO Alignment Tape (L cassette)</p> 	<p>34 AJ-CL12LP Cleaning Tape (L cassette)</p> 
<p>35 VFK1159 LISTA Software 36 VFK1186 LISTA Cable</p> 	<p>37 VFK1340 PC-EVR Adjustment Software</p> 	<p>38 VFK1341(LB40) 39 VFK1342(LB80) 40 VFK1343(LA40) 41 VFK1347(LB120) CC Filter</p> 	<p>42 VFK1345 CC Filter Holder 43 VFK1346 CC Filter Holder Step Down Ring</p> 
<p>44 VFK1158 B.E.R. Counter Tool 45 VFK1185 B.E.R. Counter Cable</p> 	<p>46 VFK1248A Flush ROM Version-Up Software</p> 	<p>48 VFK1423 Tape Sensor Cassette</p> 	<p>49 VFK1425 RS232C Comm. Software</p> 

## 5. Alignment Tapes

### DVCPRO Alignment Tape

#### VFM3580KL(NTSC)

Time (min)	Video		PCM		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar SMPTE(75%)	Composite Video Level Confirmation	1kHz - 20dB	Audio Level Confirmation	1kHz 0VU	CUE Level Confirmation
7:00	Color Bar Full Field(75%)	Component Video Level Confirmation				
14:00	H Sweep	Frequency Response			6kHz 0VU	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse&Bar	Y/C Timing				
26:00	Area Markers				-10dB, 1kHz 50Hz ~ 15kHz	Frequency Response
30:00						

#### VFM3581KL(NTSC)

Time(min)	Signal
0:00~20:00	ITI Pattern

#### VFM3582KL(NTSC)

Time(min)	Signal
0:00~10:00	X Value

#### VFM3680KL (PAL)

Time (min)	Video		PCM		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar 100%	Video Level Confirmation	1kHz -18dBu	Audio Level Confirmation	1kHz Reference	CUE Level Confirmatio
10:00	H Sweep	Frequency Response				
14:00	Area Markers				6kHz Reference	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse & Bar	Y/C Timing			1kHz 300Hz~6kHz	Frequency Response
26:00	Multi Pulse	Y/C Timing				
30:00						

#### VFM3681KL (PAL)

Time (min)	Signal
0:00 ~ 20:00	ITI Pattern

#### VFM3682KL (PAL)

Time (min)	Signal
0:00 ~ 10:00	X Value

## 6. Recommended Test And Service Equipment

### NTSC

Part No.	Name	Remark
TSG130A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1750,1760(OP.SC) or 1780R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

### PAL

Part No.	Name	Remark
TSG131A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1751,1761(OP.SC) or 1781R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

# SECTION 3

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## MAINTENANCE/DISASSEMBLY PROCEDURE & MECHANICAL ADJUSTMENT

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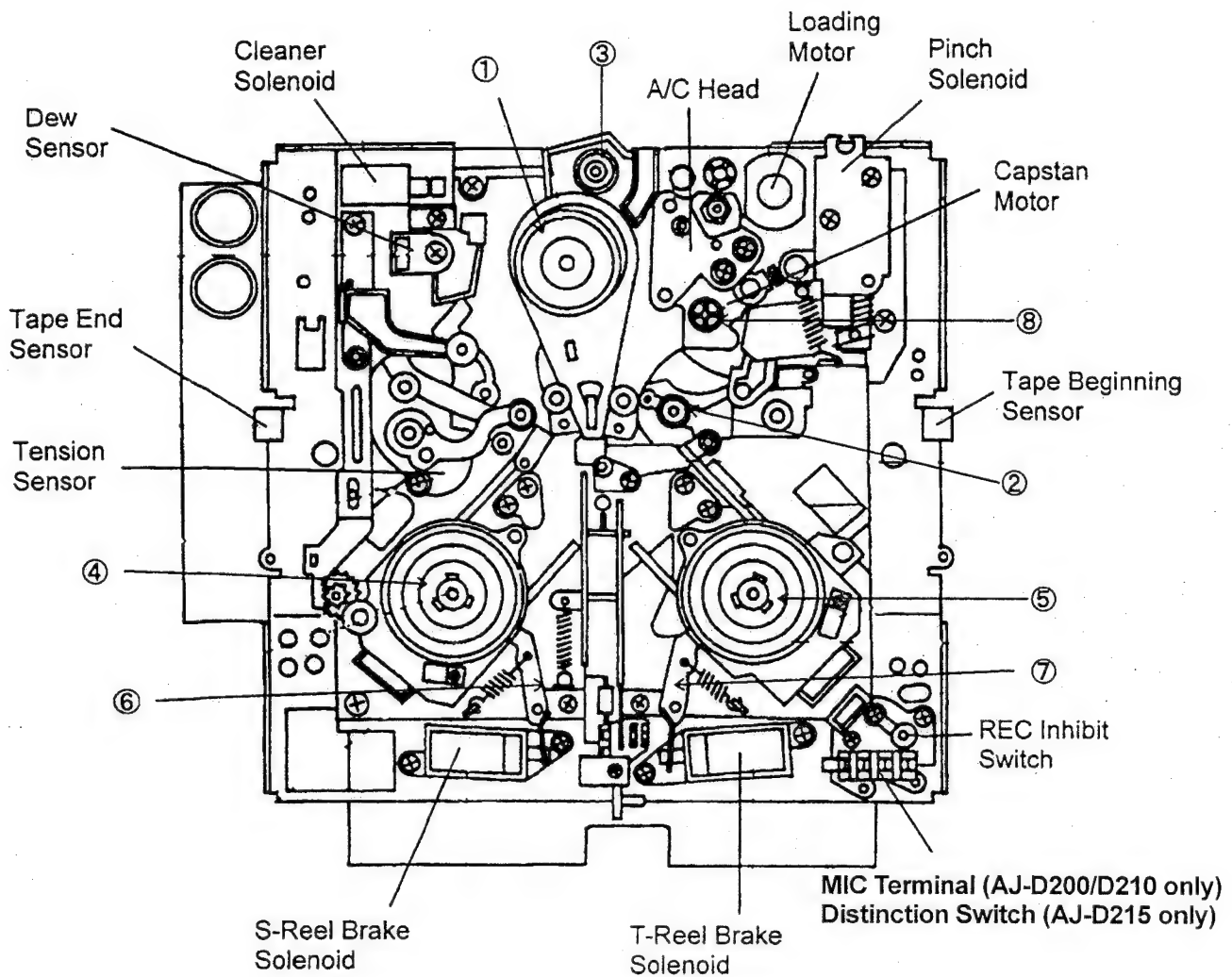


## Maintenance Schedule

No.	Name	Part Number	Using Hours					
			2,000	4,000	6,000	8,000	10,000	12,000
-	Tape Path Cleaning	---	△ Clean the Tape Path at each 500 hours					
1	Cylinder Unit	VEG1499	●	●	●	●	●	◎
2	Pinch Arm Unit	VXL2835		●■		●■		◎
3	Cleaning Arm Unit	VXL2924	●	●	●	●	●	◎
4	S Reel(Rotor Unit)	VEM0658			●			◎
5	T Reel(Rotor Unit)	VEM0659			●			◎
6	S Brake Arm	VXL2755			●			◎
7	T Brake Arm	VXL2756			●			◎
8	Thrust Screw Unit	VXQ 0556			●▲			◎
-	Mech. Chassis Unit	VXY1433						●
-	1.5" CRT(EVF)	M04KYS07WB	● 5,000 hours by the operation time					

- Note:** Using Hours are based on the Drum Rotation hours.  
 Using hours are recommendation. It may depend on temperature, humidity or dusty.  
 Using hours are listed as the reference of maintenance. They do not mean guarantee hours.
- ◎ : These parts included in Mech. Chassis Unit, Replacing Mech. Chassis Unit is recommended.
  - : The lubrication is necessary when replacing the Pinch Arm Unit.
  - △ : This mark means cleaning is necessary.
  - ▲ : The lubrication is necessary when replacing the Thrust Screw Unit.

## Parts Location



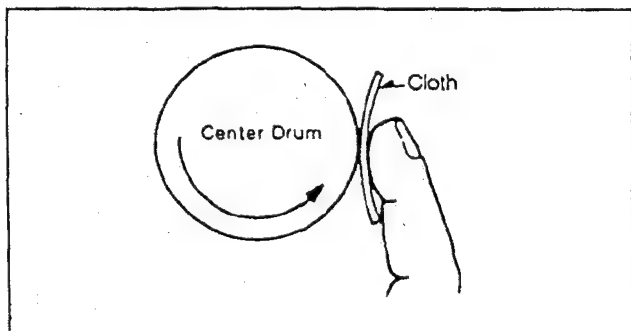
## Cleaning Procedures

Make sure the power is OFF before cleaning.  
Use ethanol (more than 99%) as cleaning liquid.

### 1. Cleaning of Head Chips (Daily)

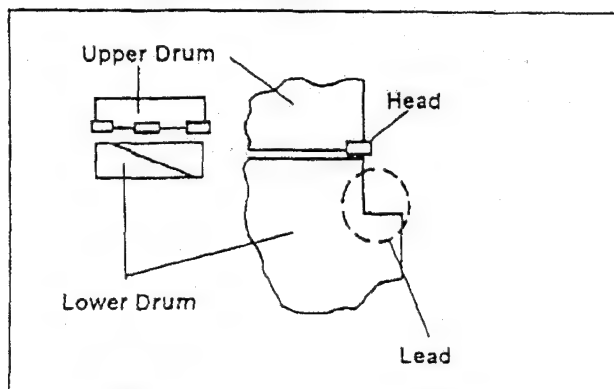
Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion.

Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.



### 2. Cleaning of Drum Lead (Weekly)

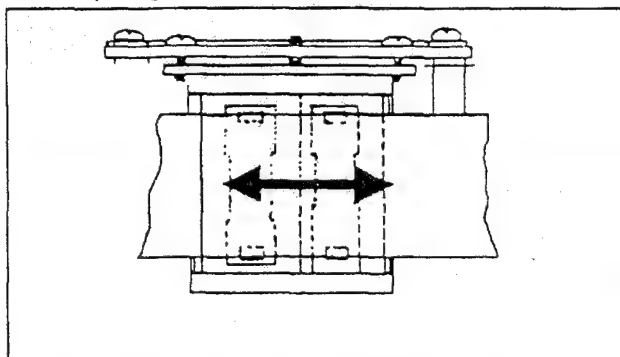
Be careful not touch a head chip. Clean the Drum Lead with a pick



### 3. Cleaning of A/C Head (Weekly)

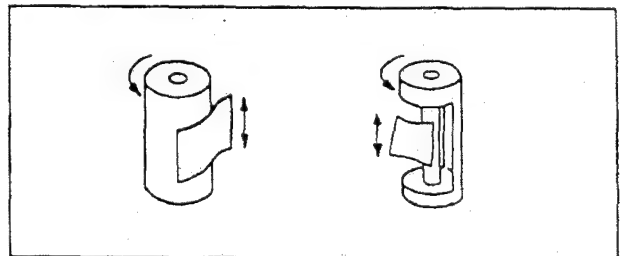
Wipe the A/C Head with a cloth soaked by cleaning liquid.

Wipe again with a dry cloth.



### 4. Cleaning of Pinch Roller and Capstan (Weekly)

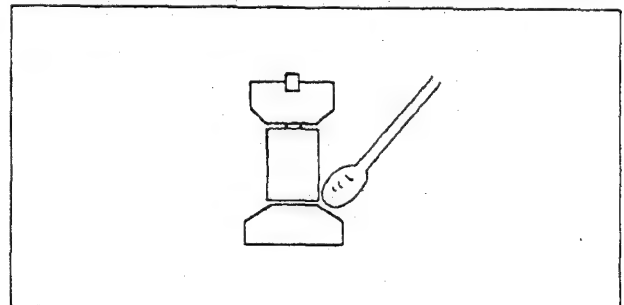
Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.



### 5. Cleaning of Post (Weekly)

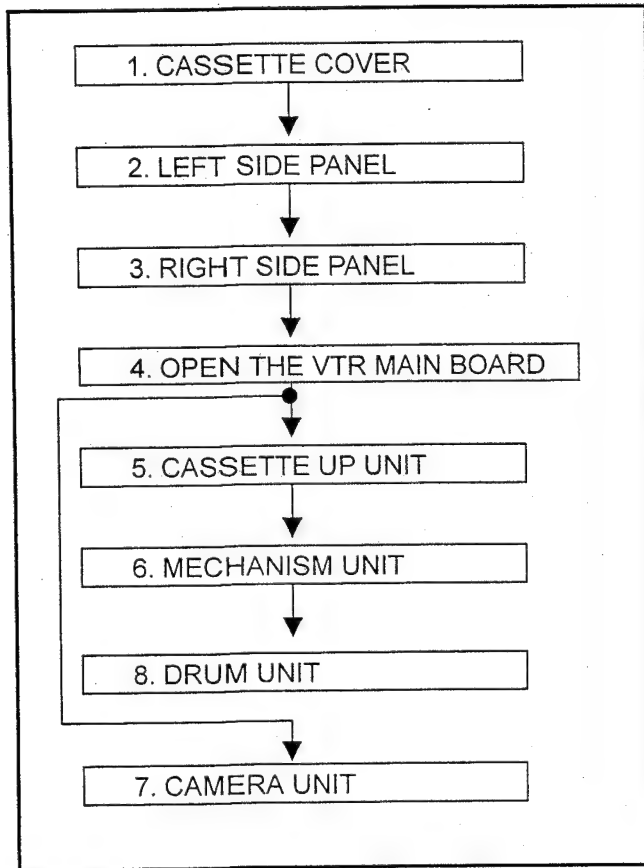
Wind a cloth on a pick. Wipe each post dry with that pick.

Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.



## DISASSEMBLY PROCEDURE

This flow chart indicates the disassembly steps the cabinet pares, P.C. Boards and Mechanism Unit in order to access to items to be serviced. When reinstalling, perform the steps in the reverse order.



## DISASSEMBLY METHOD

### 1. Removal of Cassette Cover

Loosen the 2 screws (A) and slide the cover upward then remove it.

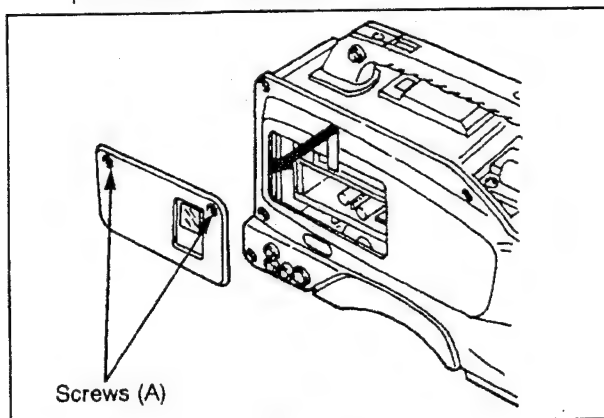


Figure 1-1

### 2. Removal of Left Side Panel

After removing the cassette cover, loosen the 7 screws (B) and remove the panel.

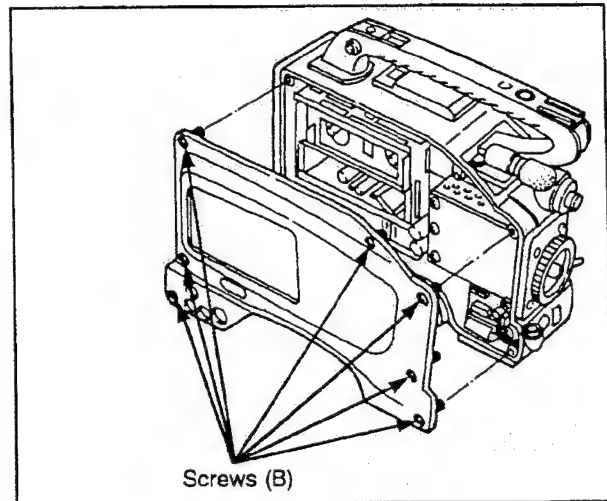


Figure 1-2

### 3. Removal of Right Side Panel

Loosen the 7 screws (C) carefully disconnect the P10 connector on the VTR Main C.B.A.

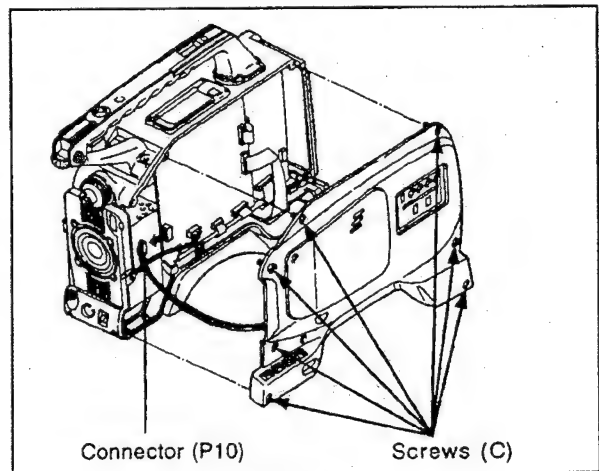


Figure 1-3

### 4. Open the VTR Main & Power C.B.A.

After removing the right side panel, unscrew the 2 screws (D), 1 screw (E) on the VTR Main board and 3 screws (F) 1 screws (G) on the Power board, then lay down the boards.

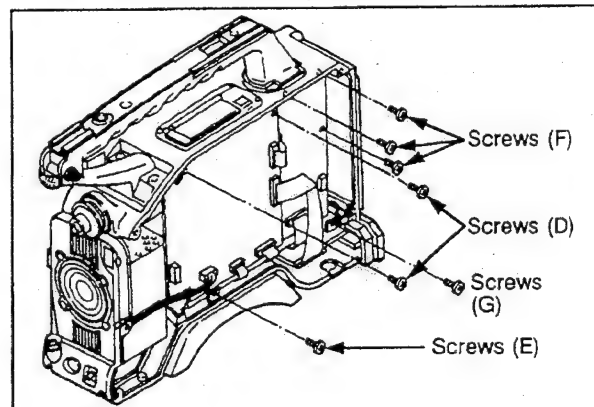


Figure 1-4

## 5. Removal of Cassette Up Unit

After removing the left side panel, unscrew the 4 screws (H) and remove it.

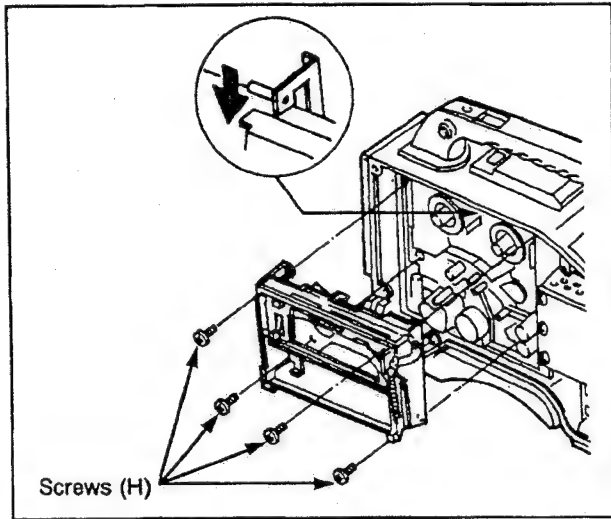


Figure 1-5

## 6. Removal of Mechanism Unit and Servo C.B.A.

After removing the loth side panel, disconnect the P3001 felxible cable on the VTR Main board.

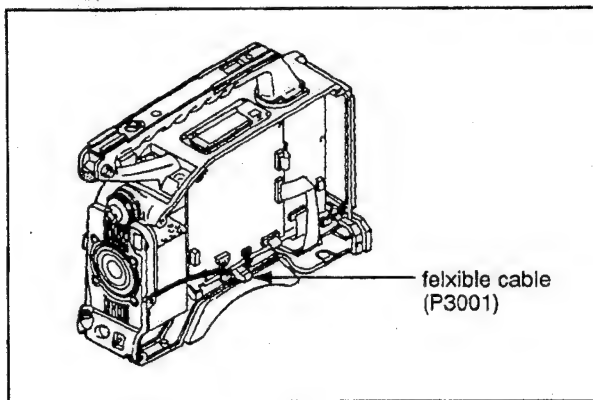


Figure 1-6

Open the board, Disconnect the P2615 connector and P2619 felxible on cable on the VTR Main board.

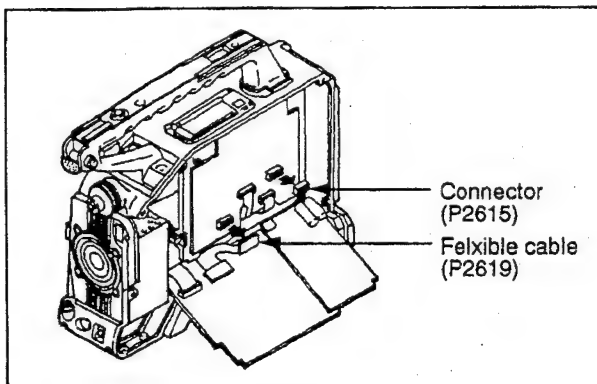


Figure 1-7

Unscrew the 2 screws (J) and slightly pull the AV Out unit then disconnect the P1005 on the Real Jack board.

Unscrew the 3 screws (K), remove the mechanism chassis and the Screw board with care not to scratch the connectors and cables.

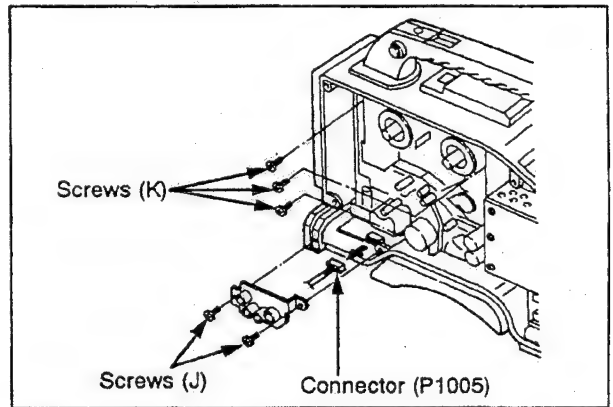


Figure 1-8

## 7. Removal of Camera Unit

After removing the both panels, disconnect the P6601, P6602 felxible cables and the P6605 connector.

Unscrew the a screw (L) on the test connector board.

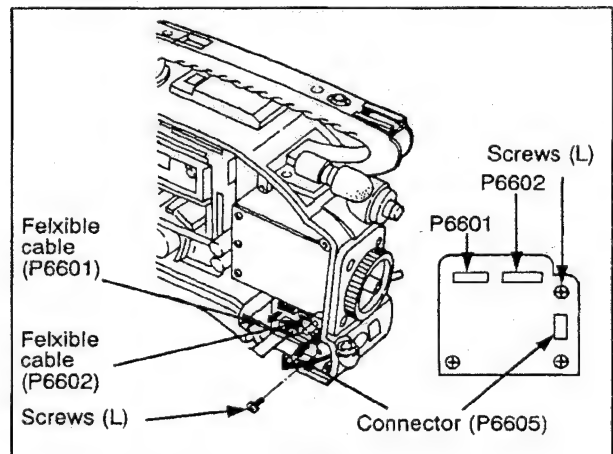


Figure 1-9

Disconnect the P7 connector and the P1 felxible cable on the VTR Main board.

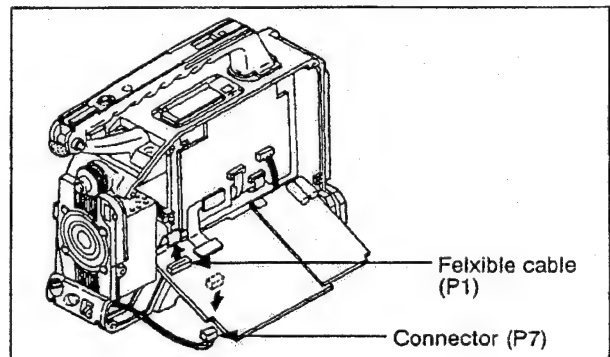


Figure 1-10

Unscrew the 4 screws (M) and pull out the camera unit.

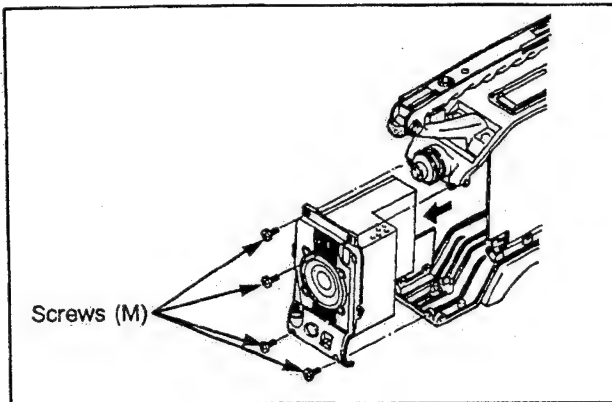


Figure 1-11

## 8. Removal of Drum Unit

After removing the mechanism unit, disconnect the P613 flexible cable. Hold the top of the drum unit and unscrew the 3 screw (N).

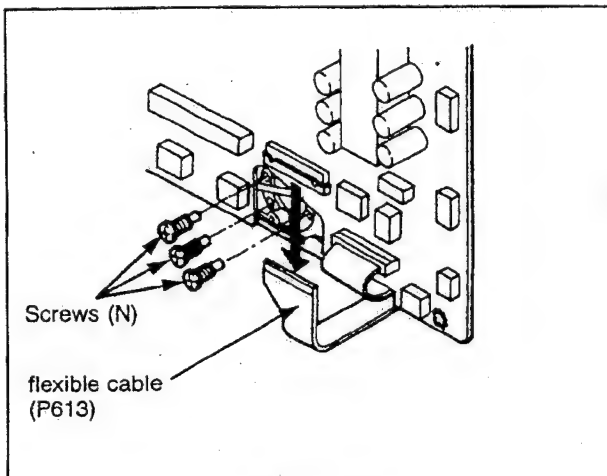


Figure 1-12

Remove the drum unit with care not to scratch the cables.

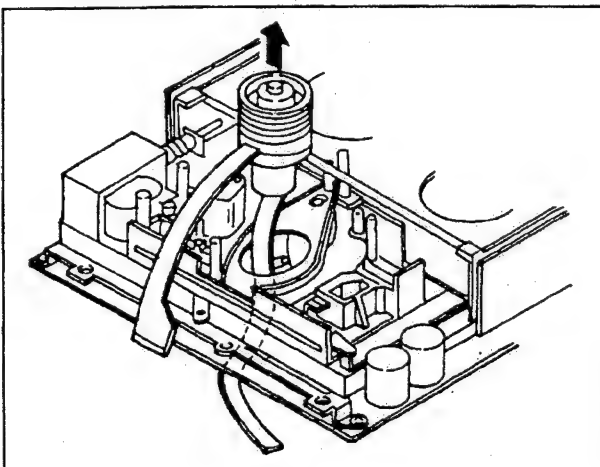


Figure 1-13

## 9. Emergency Eject

If the cassette tape cannot be ejected with pressing EJECT button or the cassette tape may be damaged by ejecting it, the cassette tape should be ejected out by the following steps.

1. Turn the power off.
2. Open the rubber cap above the GEN LOCK IN connector. Push in and rotate the red screw counterclockwise.
3. The tape is unloaded with click.
4. Continue until the cassette tape is ejected.

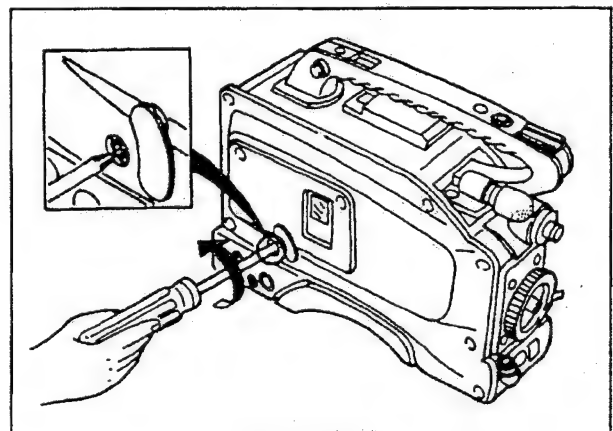


Figure 1-14

# Mechanical Parts Replacement and Adjustment Procedures

## General

When mechanical parts are replaced, pay attention to the following notes.

1. Turn power off before replacing any part.
  2. If any adjustment is required after replacing parts, perform the required adjustments.
  3. Use proper fixture tools.
  4. Make sure to clean the parts after replacement.
- Also when the mechanical parts are replaced, follow the replacement procedure.

## 1. Drum Unit Replacement

### (Removal of Mechanism Unit)

Refer to the "Section 2. Disassembly procedures" Item 1 to 6 and remove the Mechanism Unit and the Servo C.B.A.

### (Removal of Cylinder Unit)

1. Remove the T1 Guide and Cleaning Arm Unit (Refer to item 12).
2. Disconnect P3001, P613 on the Servo C.B.A. and hold the top of the Drum Unit then remove 3 screws and carefully pull out the Drum Unit with care not to scratch the flexible cables.

**Note:** Be careful when removing the flexible cable from the connector. Refer to the way to remove the connector as shown in Figure M1.

**Note:** Never touch the cylinder with a finger directly when pulling out the Drum unit.

### (Installation)

1. Install the new Drum Unit according to the opposite procedures to removing.
2. After installing T1 Guide, T1 Guide position adjustment should be performed (Refer to item 12-1).

**Note:** When installing the Drum Unit, the pin on Mech. Chassis should match hole of Drum Unit as shown in Figure M2.

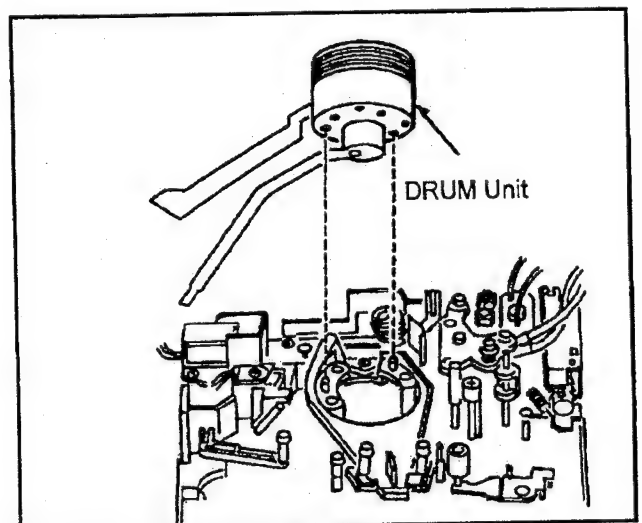


Fig. M2

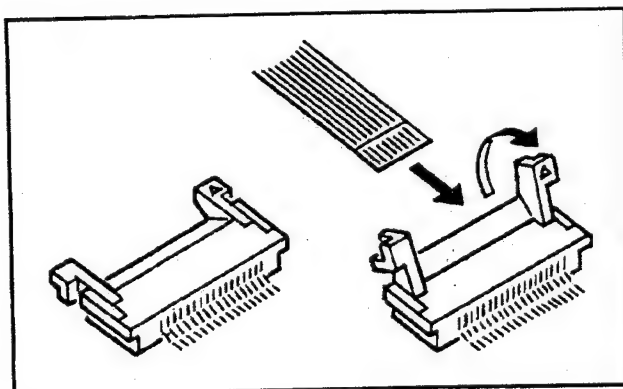


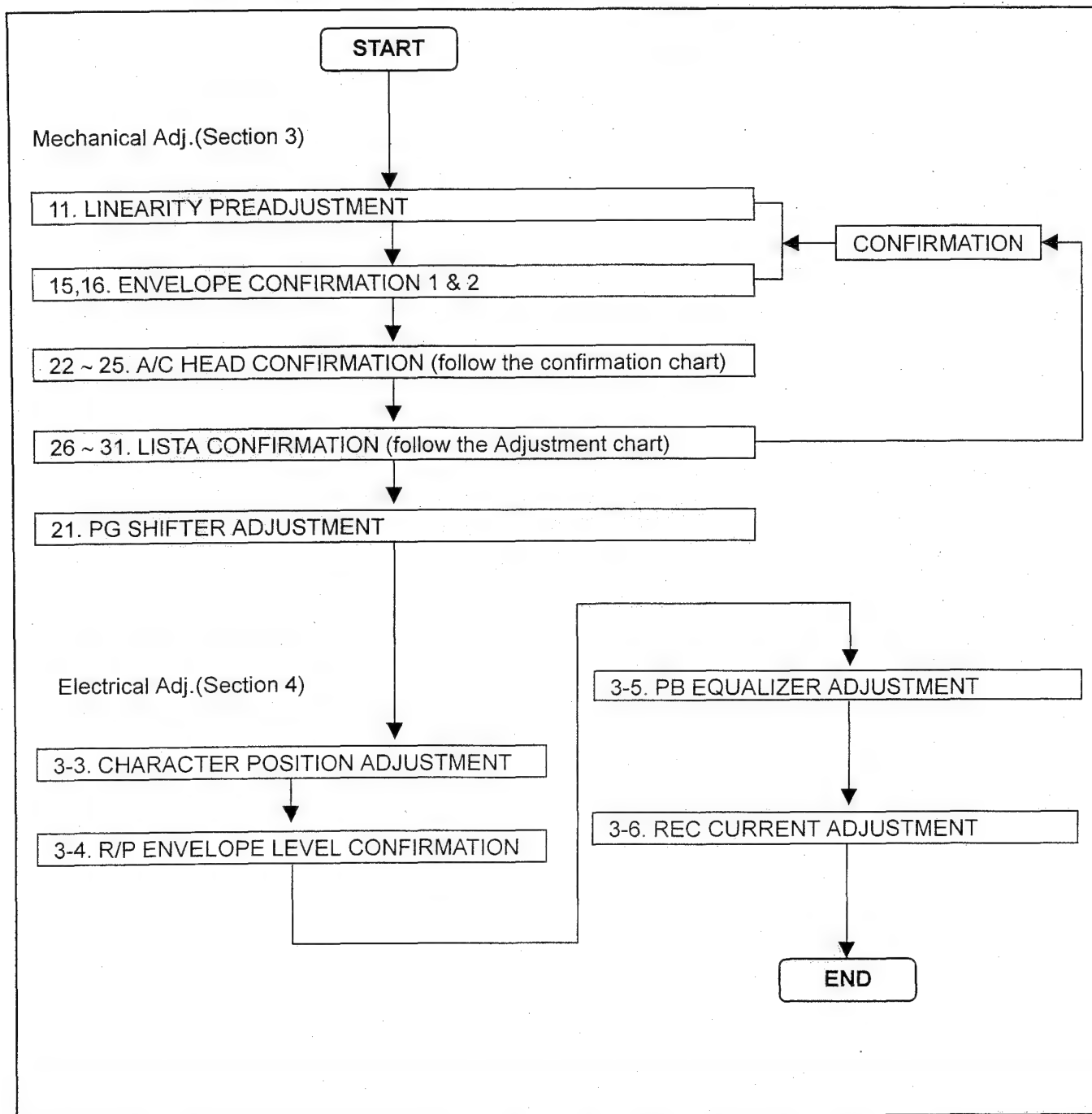
Fig. M1

## 1-1. Adjustment Flow Chart After Drum Unit Replacement

1. After changing the Drum Unit, perform the following steps.

### Adjustment Flowchart After Drum Unit & Mech. Chassis Replacement

**Note:** Confirm the tape path linearity before head replacement.  
The number indicated on the chart below is item number on the Service Manual.





## 2. A/C Head Replacement

### 2-1. Replacement

\* Required tools:

Nut Driver (5.5m/m)(VFK1150)

Hex Driver (VFK1148)

Hex Wrench (VFK1190)

**(Removal)**

1. Remove the Cassette Cover, Left Side Panel and the Cassette Up Unit.
2. Loosen the hex. screw (B) and remove the Nut (C). Pick up the Head Height Adjustment Spring and then remove the A/C Head Unit as shown in Figure M5.

**Point:** Memorize the height of Nut (C) before removing the Nut (C).

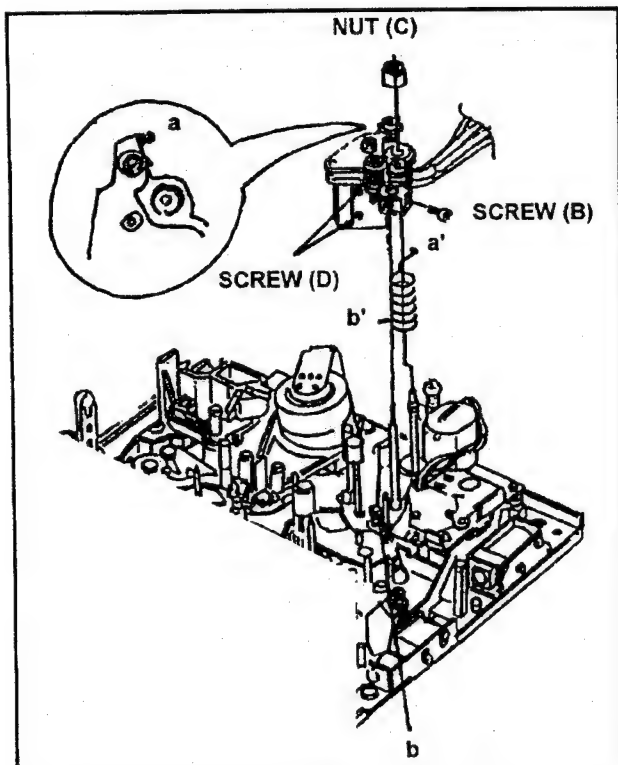


Fig. M5

4. Remove the 2 screws (A). Disconnect the connector P1005 on the Rear Jack C.B.A. and P600 on the Servo C.B.A. and then remove the A/C Head from the A/C Head Plate.

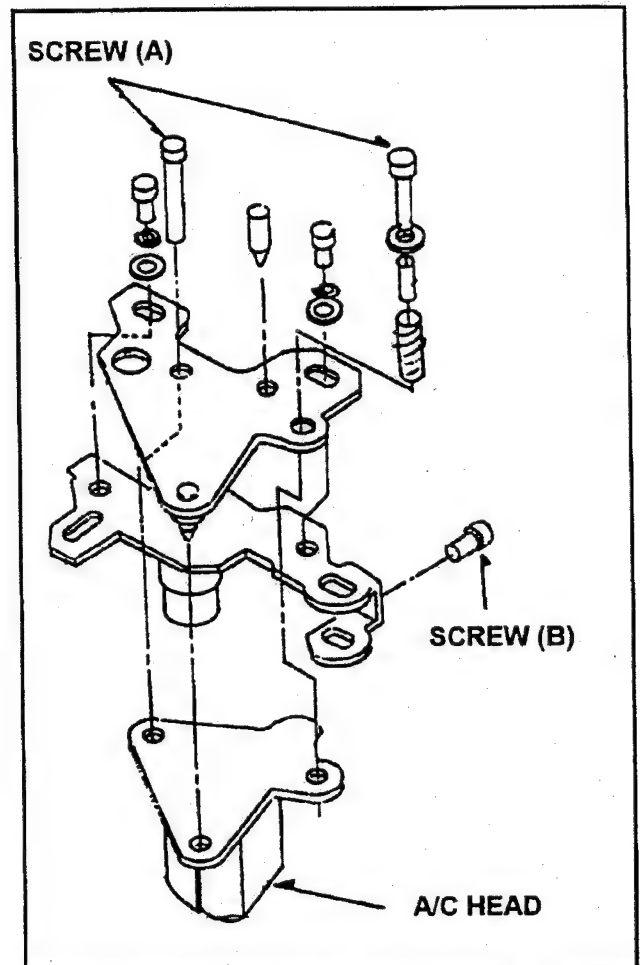


Fig. M6

5. Remove 2 screws (D) to remove the Shield Cover as shown in Figure M5.
6. Unsolder the lead wires one by one. (Don't unsolder all wires at the same time.)

**(Installation)**

1. Remove the Shield Case from the New A/C Head and solder the lead wires to New A/C Head (Refer to Figure M7).
2. Re-install the shield case to A/C Head.
3. Install the A/C Head to A/C Head Plate and tighten 2 screws (A) so that A/C Head is parallel to A/C Head Plate.
4. Install the A/C Head Unit.
5. Put on the Head Height Adjustment Spring and tighten the Nut (C).
6. Clean the surface of the A/C Head.

**Note:** After installing, Mechanical and Electrical Adjustments should be performed.  
The hex screw (B) is kept loose until the A/C Head Height Adjustment is completed.

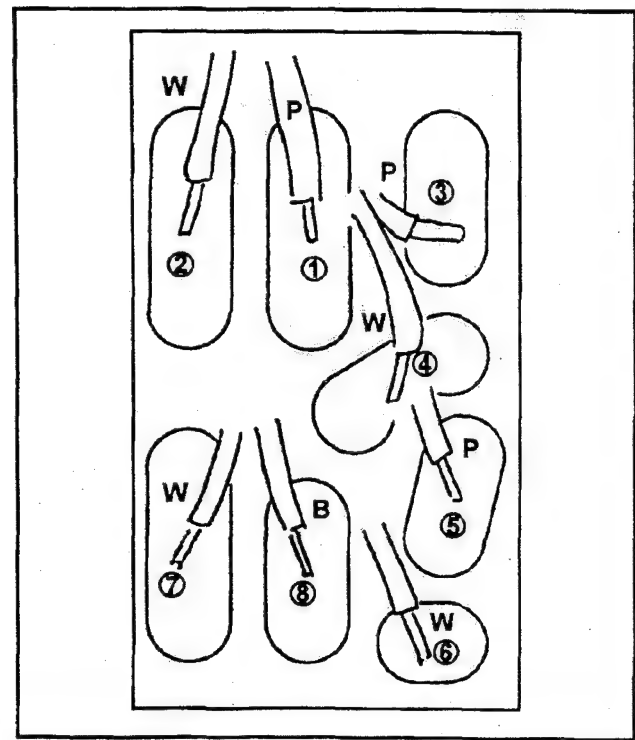
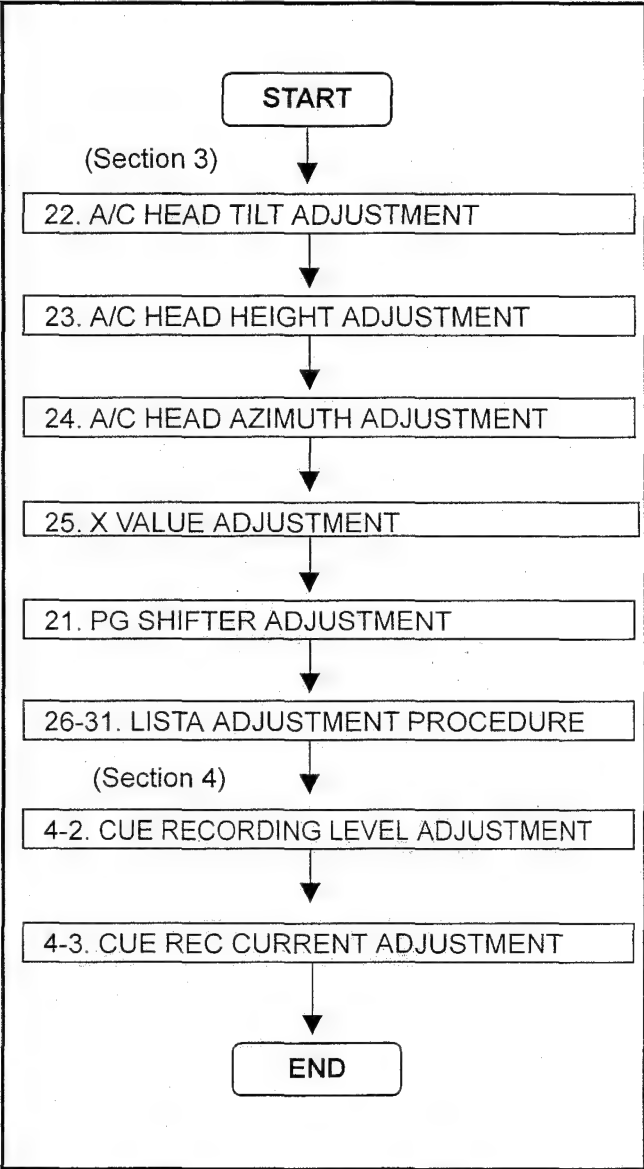


Fig.M7 Connection of A/C Head

A/C Head Side	Cable Color		Connector No.
1	PINK	YELLOW	P1005
2	WHITE		
3	PINK	RED	
4	WHITE		
5	PINK	GREEN	P600
6	WHITE		
7	WHITE	YELLOW	
8	BLACK		

## 2-2. Adjustment Flowchart After A/C Head Replacement

- After replacing the A/C Head, perform the following steps.



### 3. Reel Table Replacement

#### 3-1. Supply Reel Rotor Unit Replacement

##### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P614 on the Servo C.B.A.
3. Turn the Emergency Gear until S1 Post moved center loading position and remove the S5 Post (Refer to item 14).
4. Pull up the Arm Return Spring on the Connection Arm Angle Side and disconnect the Connection Arm Angle.
5. Unscrew the 2 screws (C) to remove the Supply Reel Stopper as shown in Figure M8.
6. Push the Reel Table to middle position and unscrew the 2 screws (D) to remove the Supply Reel Rotor Unit as shown in Figure M8.
7. Remove the 2 Cut Washers to remove the Idler Arm Unit.

#### 3-2. Take Up Reel Rotor Unit Replacement

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P615 on the Servo C.B.A.
3. Unscrews the 2 screws (E) and then remove the Take Up Reel Stopper.
4. Push the Reel Table to middle position and unscrew the 2 screws (F) to remove the Take Up Reel Rotor Unit as shown in Figure M8.

**CAUTION:** Don't touch FG portion with the magnetized screw driver.

##### (Installation for both unit)

1. Install the new Reel Rotor Unit according to the opposite procedures to removing.
2. Adjust the "4 Reel Torque Adj." and confirm "2. Main Brake Torque" in the Section 3.

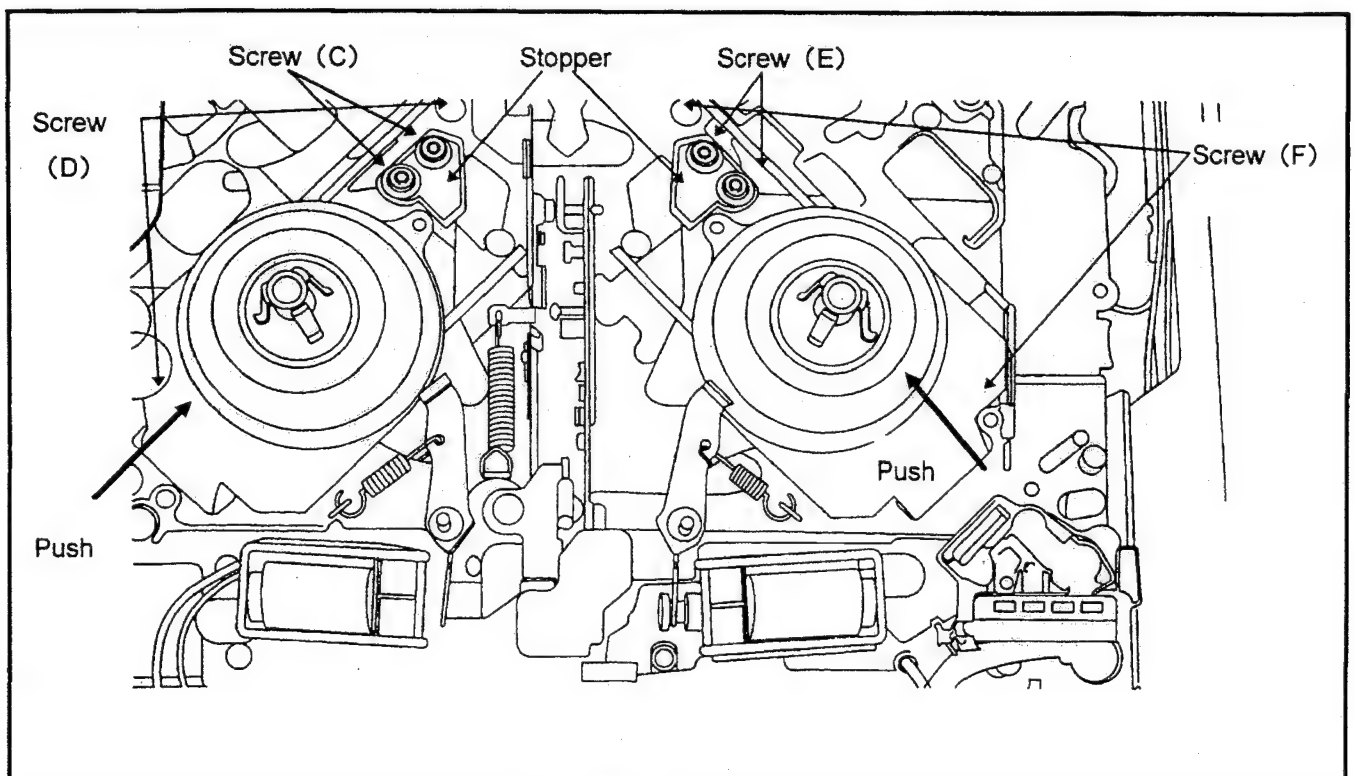


Fig. M8

## 4. Pinch Solenoid Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P610 on the Servo C.B.A.
3. Unscrew the 2 screws (A) and remove the Pinch Solenoid Unit as shown in Figure M9.
4. Unscrew the 2 screws (B) and remove the Pinch Solenoid Angle.
5. Unscrew the 2 screws (C) and remove the Pinch Solenoid from the Pinch Solenoid Base.

### (Installation)

1. Install the new Pinch Solenoid according to the opposite procedures to removing.
2. After installing, Pinch Solenoid Position Adjustment is required. (Refer to "1. Pinch Solenoid Adj." in the Section 3).

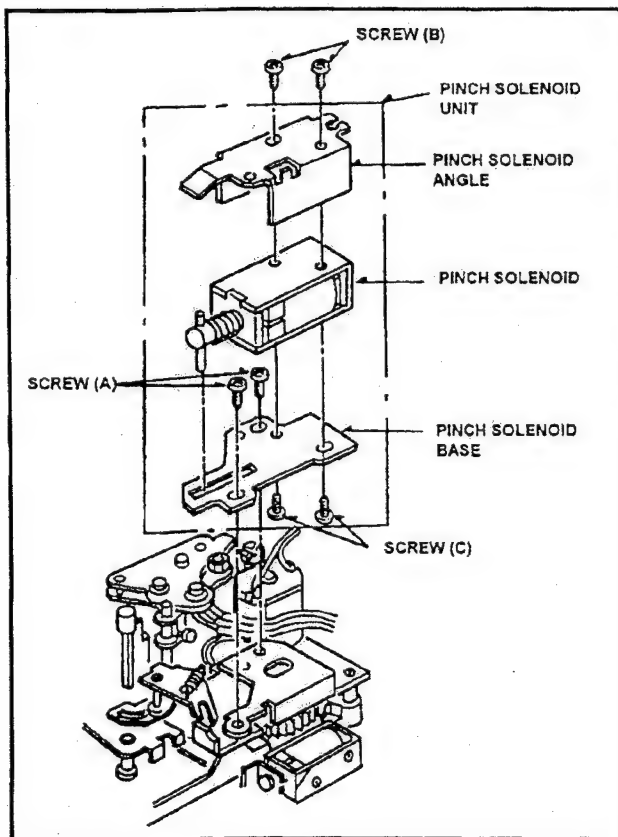


Fig. M9

## 5. Pinch Arm Unit Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Remove the Pinch Solenoid Unit (Refer to item 4).
3. Remove the Cut Washer (A) to remove the Pinch Solenoid Lever as shown in Figure M10.
4. Remove the Cut Washer (B) to remove the Pinch Arm Unit as shown in Figure M.10.

### (Installation)

1. Install the new Pinch Arm Unit according to the opposite procedures to removing.
2. After installing, Pinch Solenoid Position Adjustment is required. (Refer to "1. Pinch Solenoid Adj." in the Section 3).

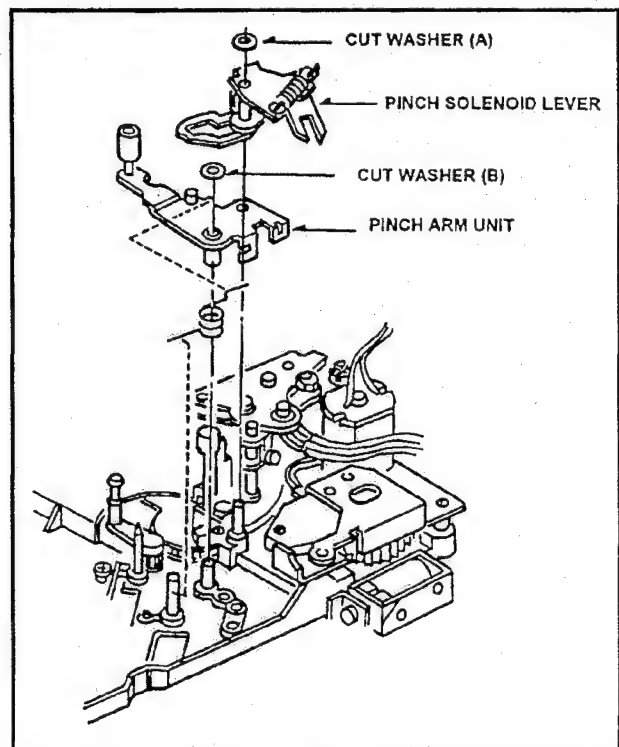


Fig. M10

## 6. Loading Motor Unit Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P611 on the Servo C.B.A.
3. Remove the Pinch Solenoid and Pinch Solenoid Lever.(Refer to item 4 & 5).
4. Unscrew the screw (B) to remove the Emergency Shaft as shown in Figure M11.
5. Unscrew the 2 screw (C) to remove the Loading Motor Unit as shown in Figure M11.
6. Unscrew the 2 screw (D) to remove the Loading Motor Neutral Unit as shown in Figure M11.

### (Installation)

1. Install the new Loading Motor Unit according to the opposite procedures to removing.
2. Install the Pinch Solenoid Unit. After installing, Pinch Solenoid Position Adjustment is required. (Refer to "1. Pinch Solenoid Adj." in the Section 3).

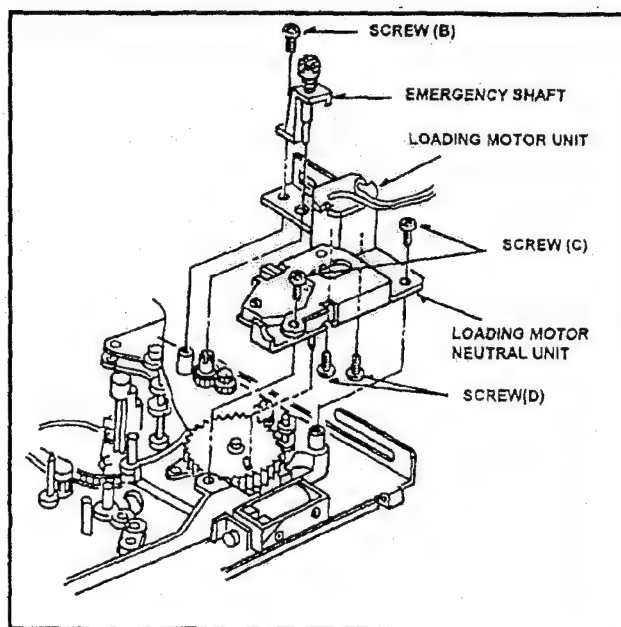


Fig. M11

## 7. Mode Select Switch Unit Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P612 on the Servo C.B.A.
3. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 4 to 6).
4. Remove the screw (D) to remove the Mode Select Switch Unit from Loading Motor Neutral Unit as shown in Figure M12.

### (Installation)

1. Install the New Mode Select Switch Unit according to the opposite procedures to removing.

**Note:** Confirm that the pin of Mode Switch Unit matches groove of Main Cam Gear.

2. After installing, Pinch Solenoid Position Adjustment is required. (Refer to "1. Pinch Solenoid Adj." in the Section 3).

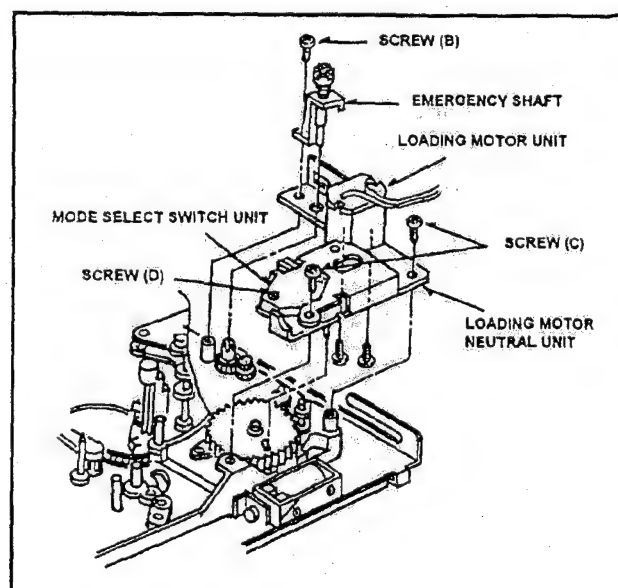


Fig. M12

## 8. Main Cam Gear Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 4 to 6).
3. Remove the Main Cam Gear as shown in Figure M13.

### (Installation)

1. Install the Main Cam Gear so that the pin of Main Cam Arm Unit (※) matches the groove position of Main Cam Gear as shown in Figure M13.
2. Follow the opposite procedures to removing.
3. After installing, Pinch Solenoid Position Adjustment is required, (Refer to "1. Pinch Solenoid Adj." in the Section 3).

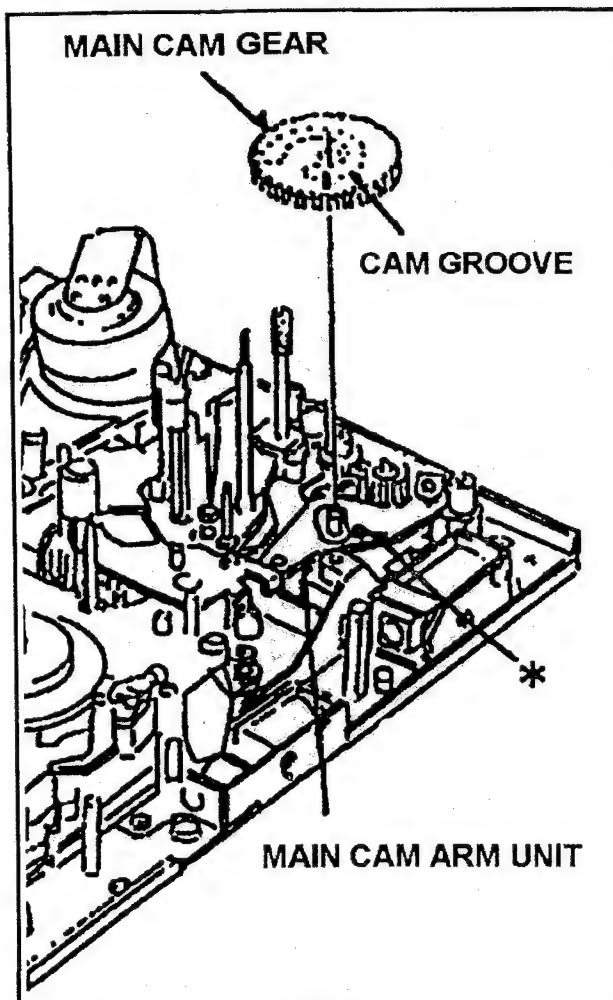


Fig. M13

## 9. Brake Arm & Brake Solenoid Replacement

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connectors P605, P608 on Servo C.B.A.
3. Unscrew the 2 screws (A) to remove the Supply Brake Solenoid and unscrew the screw (B) to remove the Solenoid base as shown in Figure M14.
4. Remove the cut washer (C) to remove the Supply Brake Arm.
5. Unscrew the 2 screws (D) to remove the Take Up Brake Solenoid and unscrew the screw (E) to remove the Solenoid base as shown in Figure M14.
6. Remove the cut washer (F) to remove the Take Up Arm.

### (Installation)

1. Install the new cassette Brake Base Unit according to the opposite procedures to removing.

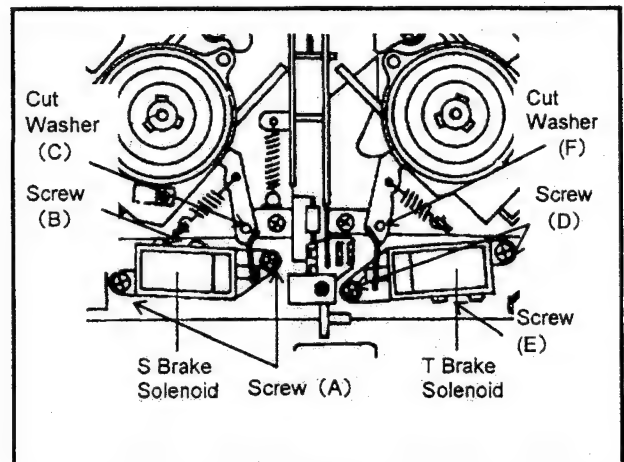


Fig. M14

2. After installing, the Brake Solenoid Position Adjustment is required (Refer to item 16 in this section).

## 10. MIC Base Unit Replacement

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P607 on Servo C.B.A.
3. Unscrew the 2 screws (A) and remove the MIC Base Unit as shown in Figure M15.

### (Installation)

1. Install the new MIC Base Unit according to the opposite procedures to removing.
2. Confirm that the M cassette touches to MIC Base Unit properly.

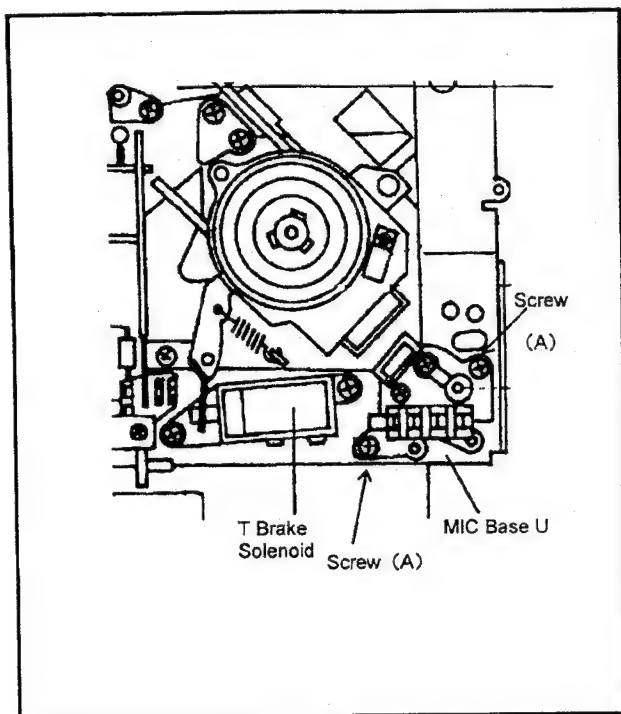


Fig. M15

## 11. S1 & T1 Post Loading Arm Unit Replacement and Adjustment

### (Removal)

1. Remove the Cassette Cover, both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Remove the Mechanism Chassis Unit and the Drum Unit.
3. Remove the T1 Guide and the Cleaning Arm Unit.
4. Turn the Emergency Gear until middle loading position and unscrew the screw (D),(E) as shown in Figure M16.
5. Remove the S5 Stopper Base and the Tension Arm Unit (Refer to item 14 & 15).
6. Unscrew the screw (A) and remove S1 Post from the Loading Rail as shown in Figure M16.
7. Remove the Cut Washer (B) and remove the S1 Loading Arm Unit as shown in Figure M16.
8. Unscrew the screws (C), and remove the T1 Post from Loading Rail as shown in Figure M16.
9. Remove the T1 Boat Unit from T1 Loading Arm Unit as shown in Figure M16.

### (Installation)

1. Install the new S1 or T1 Loading Arm Unit according to the opposite procedures to removing. Then S1 Post Loading Arm Unit Phase Adjustment should be performed.
2. After installing, confirm that the S1 and T1 Post moves smoothly on the Loading Rail.

### (Adjustment)

1. Adjust S1 Post Loading Arm Unit so that the hole (A) should match hole (B) as shown in Figure M16.
2. When installing the T1 Boat Unit, the hole (A) should match hole (B) as shown in Figure M17.
3. Tension Arm, Post Height Pre-Adjustment and Linearity Adjustment (Refer to the Section 3) should be performed.

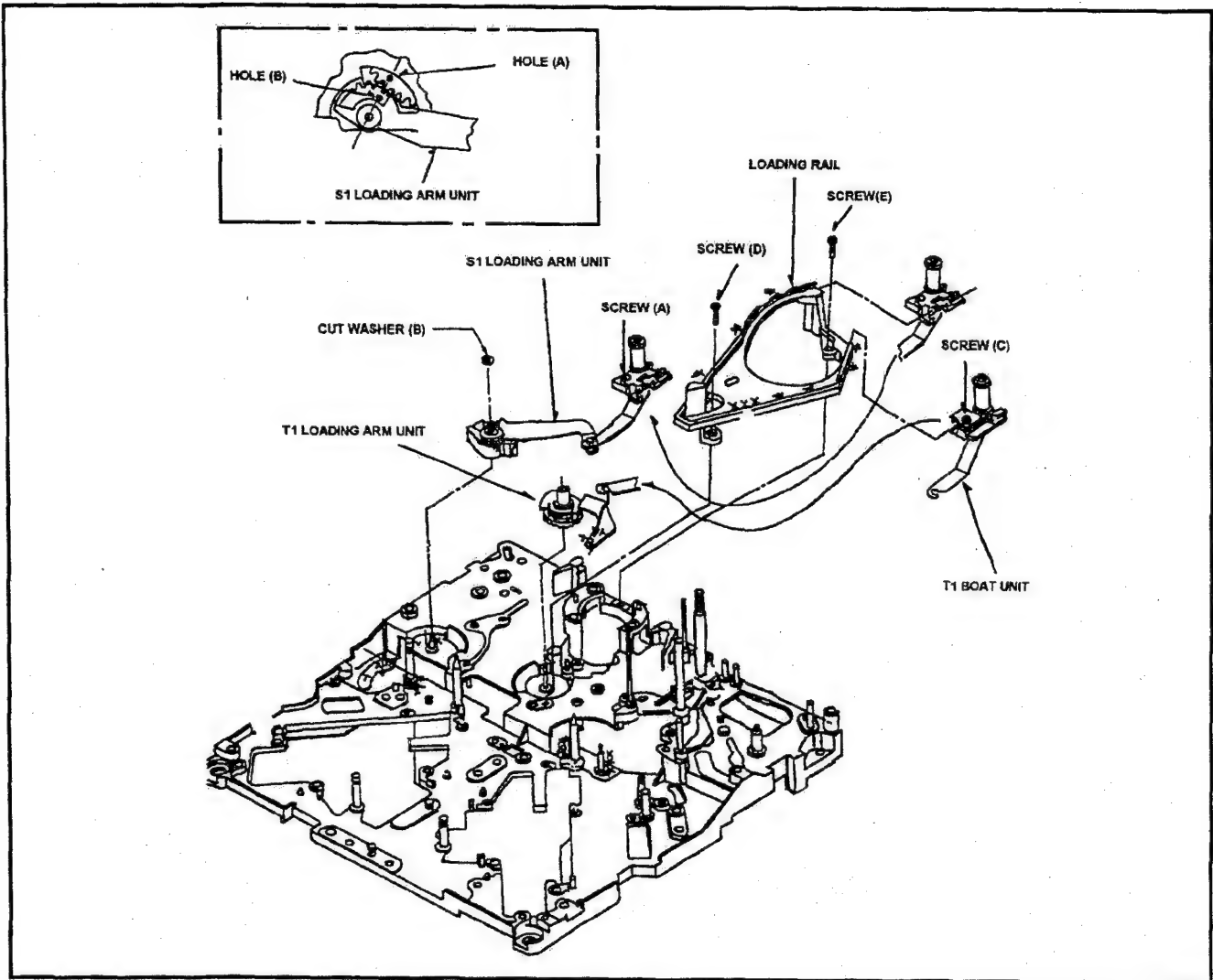


Fig. M16

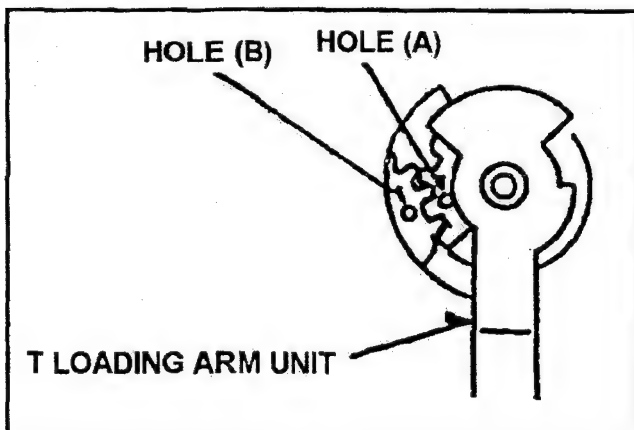


Fig. M17



## 12. Cleaning Arm Unit Replacement

### (Removal)

1. Remove the Cassette Cover and Left Side Panel.
2. Unscrew the 2 screws (A) to remove the T1 Guide.
3. Pick up the tip portion (B) of Cleaning Arm Unit and remove the spring from Cleaner Arm Unit. Then remove the Cleaning Arm Unit as shown in Figure M18.

### (Installation)

1. Install the cleaning Arm Unit, then hang the spring on Cleaning Arm Unit.
2. Install the T1 Guide and tighten 2 screws (A).
3. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated by hand,.
4. T1 Guide position adjustment should be performed.

### 12-1. T1 Guide Position Adjustment

Place the unit in Loading completion mode.

#### <How to Make the No Tape Loading>

- Set a black tube to TAPE LED sensor.
  - Turn on the power and then the VTR begins loading without tape. And unplug DC input to the unit.
1. Observe the clearance (B) between T1 Guide and T1 post as shown in Figure M19. And make sure that it is within 0.2 to 0.5mm.
  2. If not loosen the 2 screws (A) and adjust the position of T1 Guide by moving to arrow direction (G ⇌ G) so that the clearance (B) is within specification. And tighten the 2 screws (A).

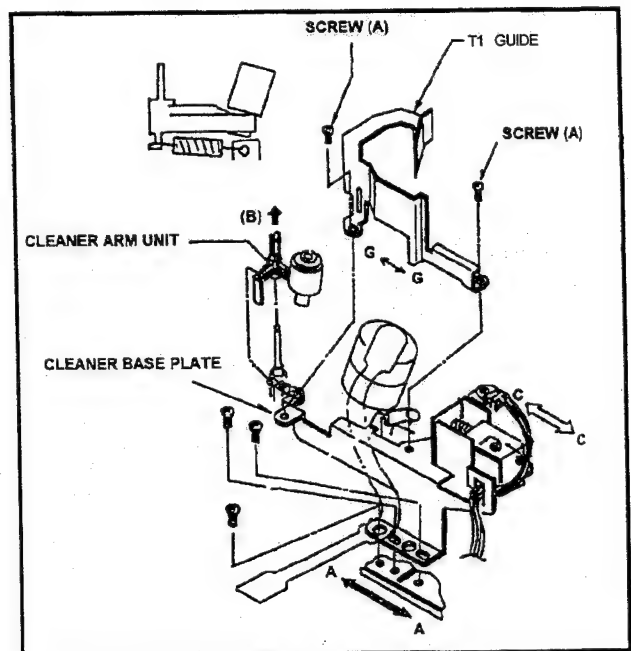


Fig. M18

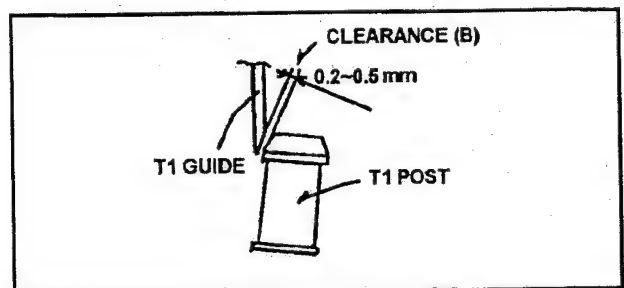


Fig. M19

## 13. Cleaner Solenoid Replacement and Adjustment

### (Removal)

1. Remove the Cassette Cover both Side Panel, Cassette Up Unit and open VTR MAIN C.B.A.
2. Disconnect the connector P618 on the Servo C.B.A.
3. Unscrew the 2 screws (A) and remove the Cleaner Solenoid Unit as shown in Figure M20.
4. Unscrew the 2 screws (B) and remove the Cleaner Solenoid as shown in Figure M20.

### (Installation)

1. Install the new Cleaner Solenoid according to the opposite procedures to removing.
2. After installing, Cleaner Solenoid Position adjustment should be performed as follows.

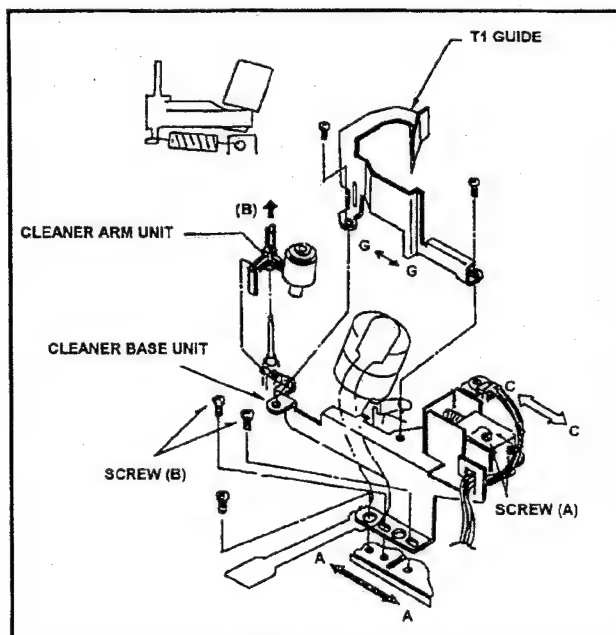


Fig. M20

## 13-1. Cleaner Solenoid Position Adjustment

※ Required Tools : Eccentric Driver (VFK0357)

1. Press the iron core of Cleaner Solenoid.
2. Observe the clearance (D) between Cleaning Arm Unit and Cleaner Base Plate as shown in Figure M21. And make sure that it is within 0.5 to 0.7mm.
3. If not, loosen the 2 screws (A) and adjust the position of Cleaner Solenoid Unit by moving to arrow direction (C ⇄ C) with eccentric driver so that the clearance (D) is within specification, And tighten the 2 screws (A).
4. After adjustment, confirm as follows.
5. Press the iron core of Cleaner Solenoid to release, and then return the Cleaning Roller to original position.
6. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated by hand.

**Note:** If removing the cleaner Base Plate, Cleaner Roller Position Adjustment should be performed.

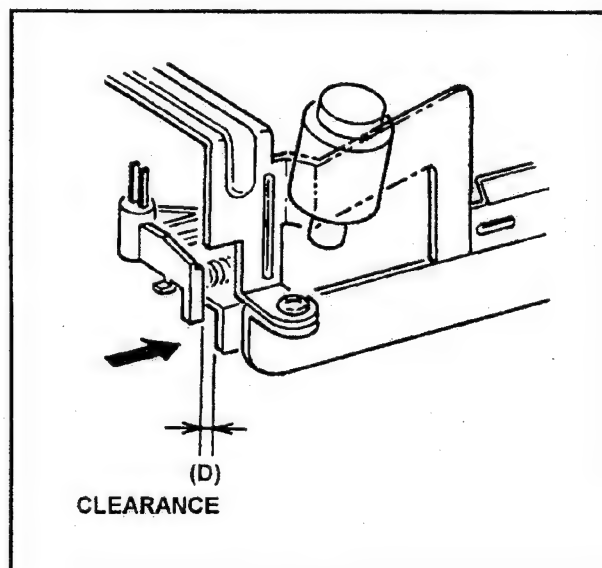


Fig. M21

### 13-2. Cleaner Roller Position Adjustment

\* Required Tools : Eccentric Driver (VFK0357)

1. Observe the clearance (A) between Cleaner Roller and Cylinder Unit as shown in Figure M22. And make sure that it is within 1.0 to 1.2mm.
2. If not, loosen the 2 screws (B) and adjust the position of Cleaner Base Plate by moving to arrow direction (A ⇌ A) with the Eccentric Driver so that the clearance (A) is within specification. And tighten the 2 screws (B).

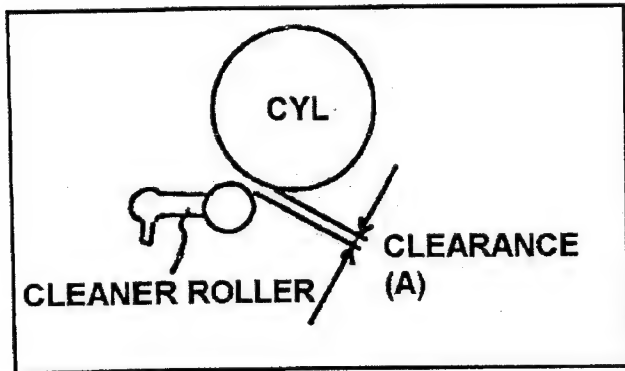


Fig. M22

### 14. S5 Post Base Unit Replacement

#### (Removal)

1. Remove the Cassette Up Unit.
2. Unscrew the screw (A) and remove the S5 Post Base Unit as shown in Figure M23.

#### (Installation)

1. Install the S5 Post Base Unit according to the opposite procedures to removing.
2. After installing, Post Height Pre-adjustment and Linearity Adjustment (Refer to the Section 3.) should be performed.

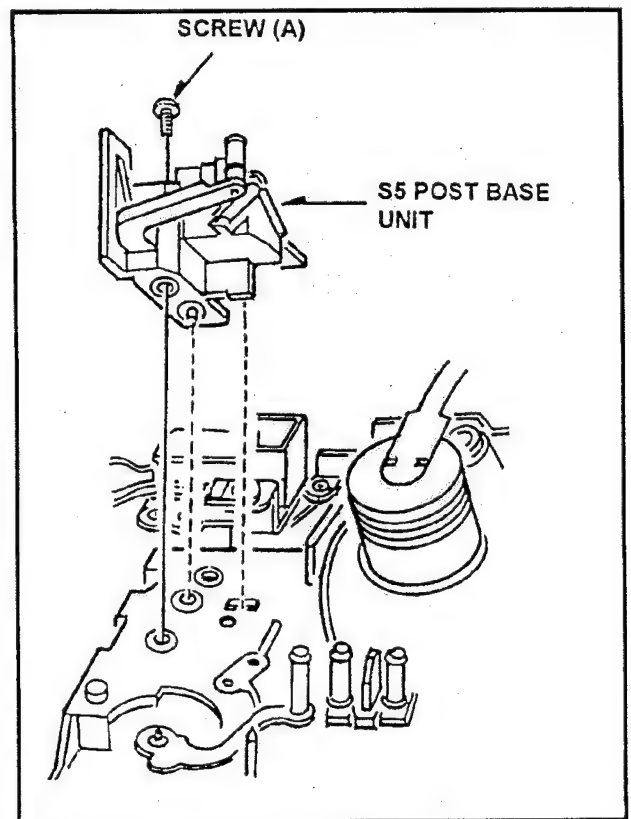


Fig. M23

## 15. Tension Arm Unit Replacement

### (Removal)

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the Cut Washer (A) and pick up the Tension Reg. Spring Then remove the Tension Arm Unit as shown in Figure M24.

### (Installation)

1. Install the new Tension Arm Unit according to the opposite procedures to removing.
2. After installing, Tension Arm Adjustment should be performed as follows.

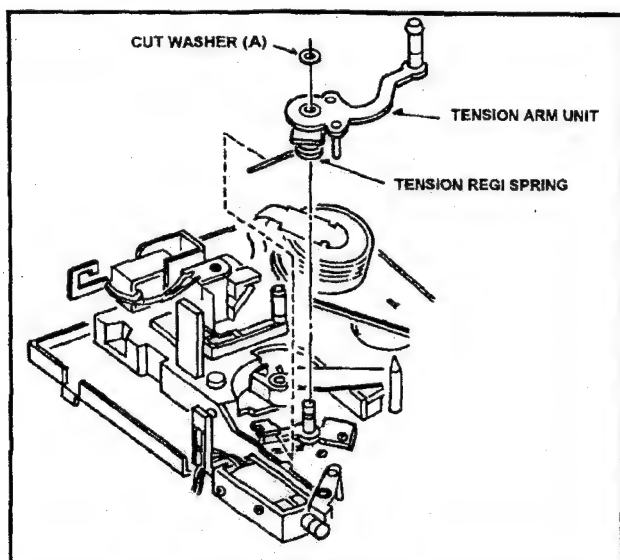
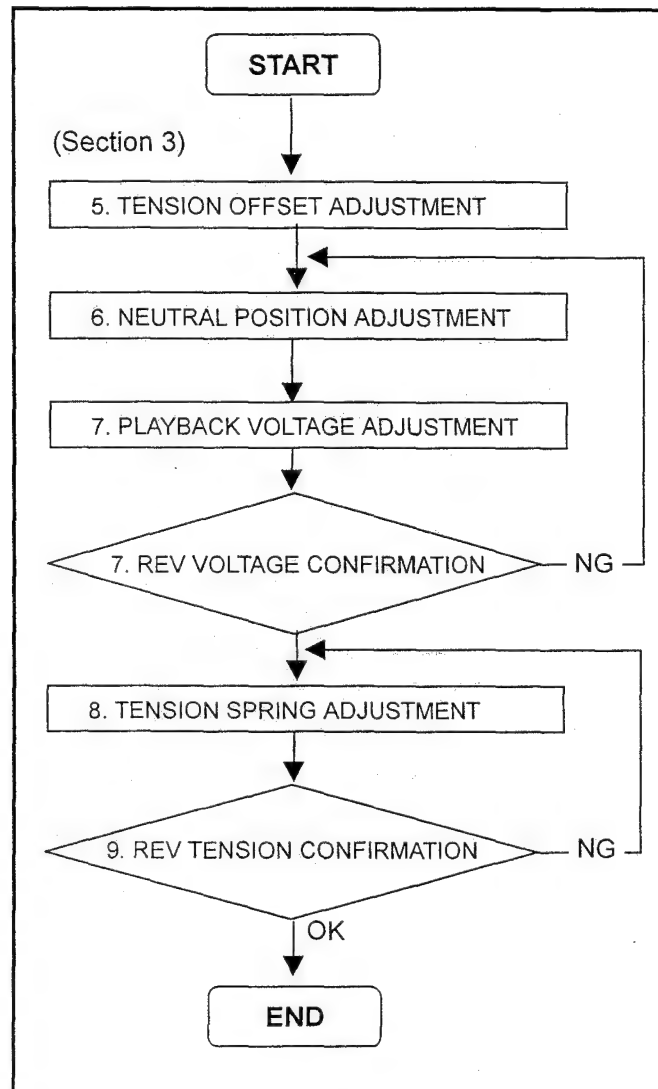


Fig. M24

## Tension Arm Adjustment Flowchart



## 16. Brake Solenoid Position Adjustment.

1. Press the iron core of the Brake Solenoid.
2. Loosen the 2 screws (A) for S-Brake Solenoid and adjust position of Solenoid unit by moving to slightly left or right so that the clearance (A) is within  $0.8 \pm 0.2\text{mm}$ .

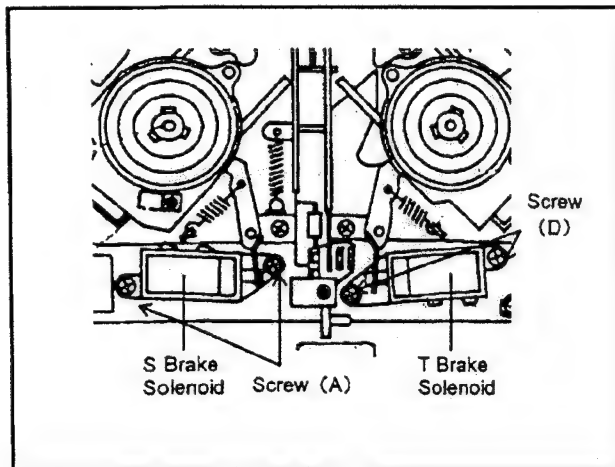


Fig. M25

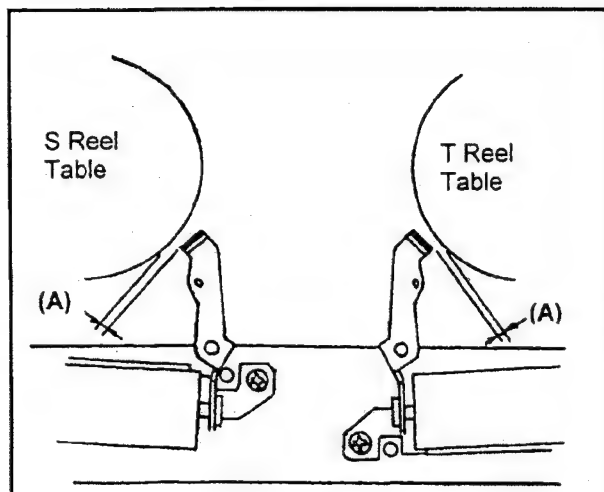


Fig. M26

## 17. Thrust Adjustment Screw Replacement

1. Remove the Thrust Adjustment Screw.
2. Enforce cleaning of point department of capstan shaft with an applicator.
3. Put the oil (VFK0906) on a new Thrust Adjustment Screw, and install the upper end of the Capstan Housing.
4. Turn the Thrust Adjustment Screw slowly to clockwise until the Capstan Rotor just starts turning (separate from the Capstan Rotor).
5. Turn the Thrust Adjustment Screw another an angle of  $270^\circ$  from  $180^\circ$  (about  $225^\circ$ ) clockwise as shown in the Fig. M8.
6. Put the glue (Ex: Three Bond 1401B) on the Thrust Adjustment Screw.
7. Confirm whether the Oil Seal doesn't come in contact with the Capstan Housing.

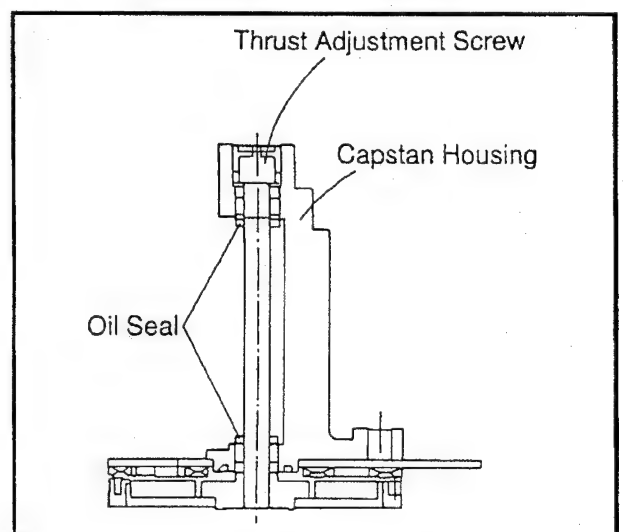


Fig. M27

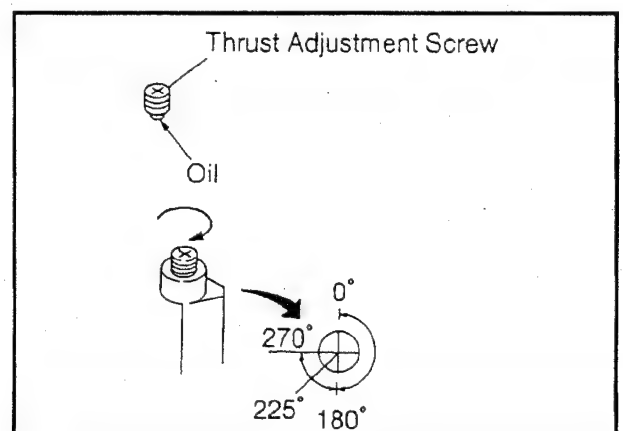
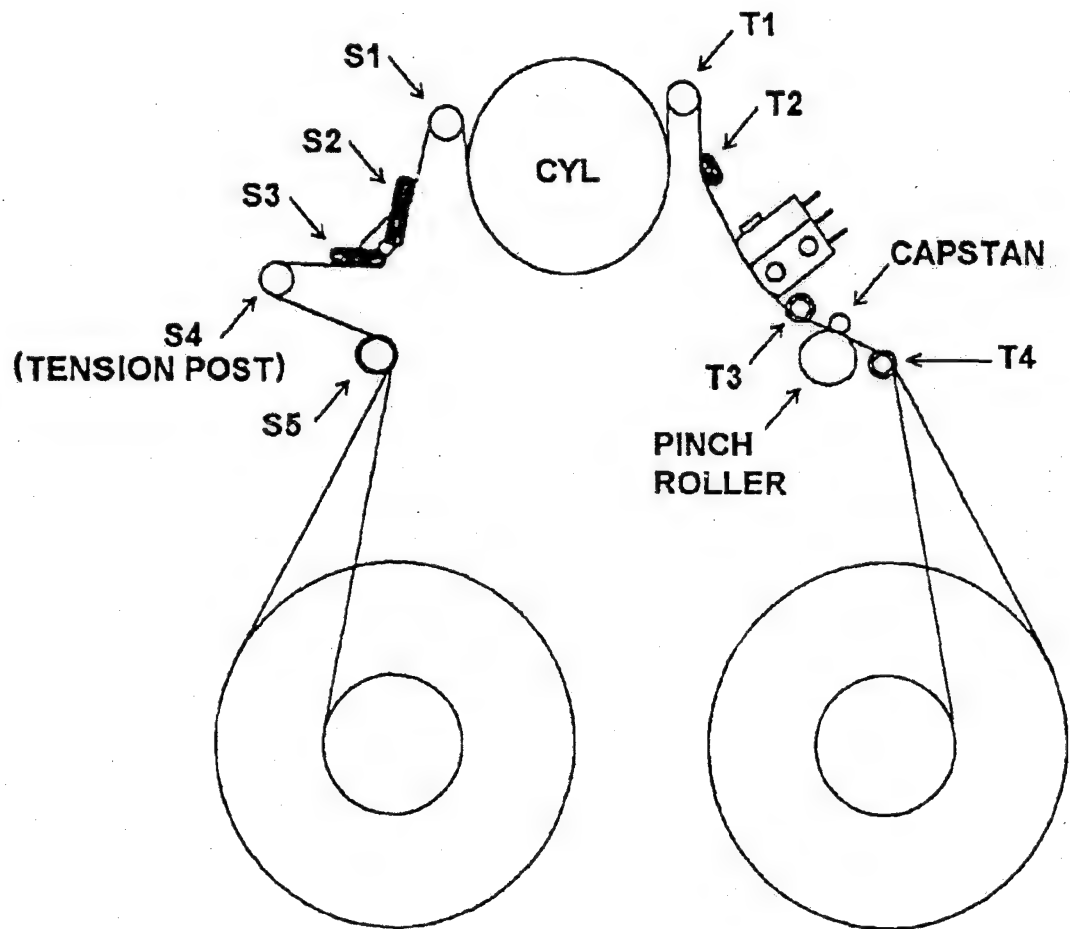


Fig. M28

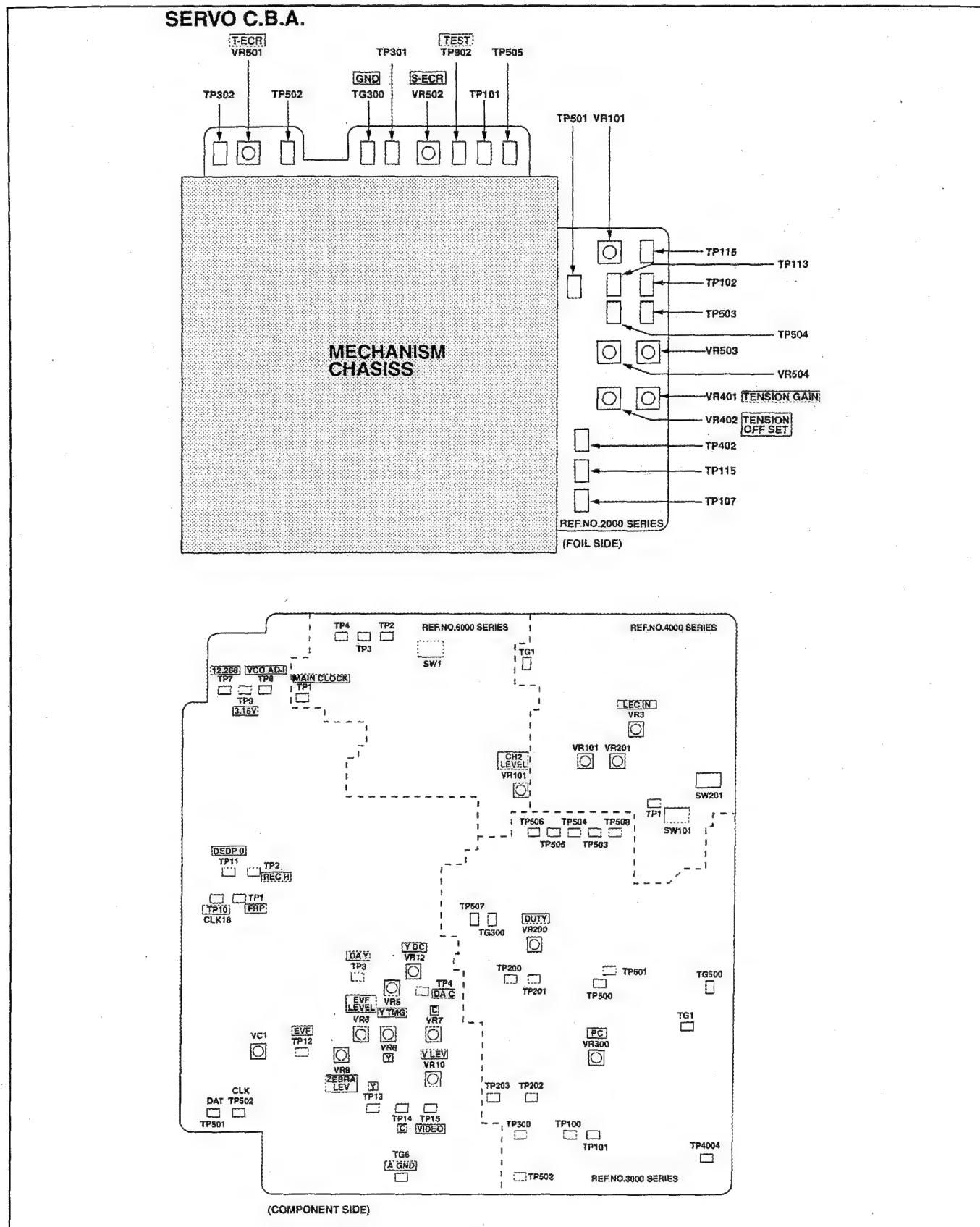
## Mechanical Adjustment

### Name of tape transportation



## TP & VR location

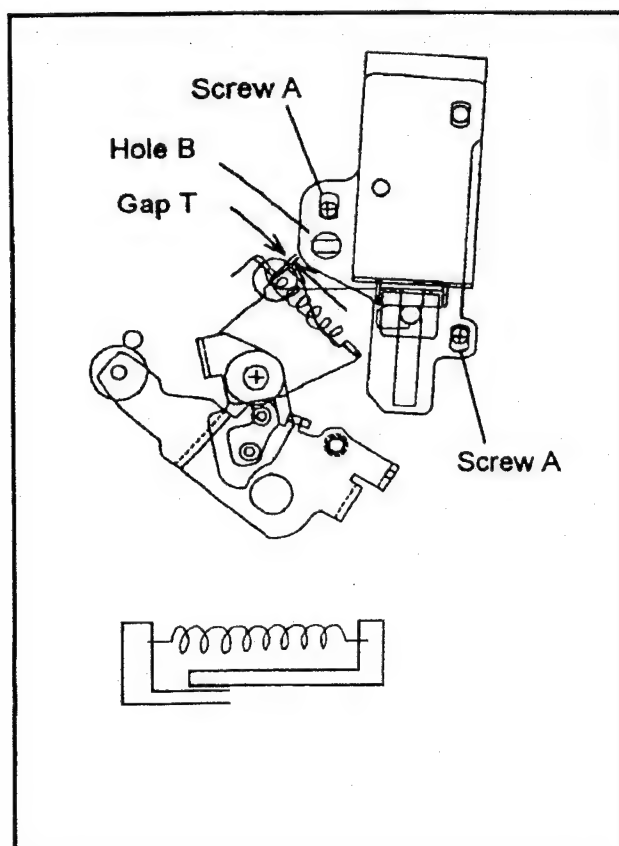
SERVO C.B.A.  
VTR MAIN C.B.A.



## 1. Pinch Solenoid Adjustment

<b>SPEC.</b>	T=0.3mm
<b>TEST</b>	Gap T
<b>ADJUST</b>	Screw A, Hole B
<b>MODE</b>	Eject (Power OFF)
<b>TOOL</b>	VFK0357

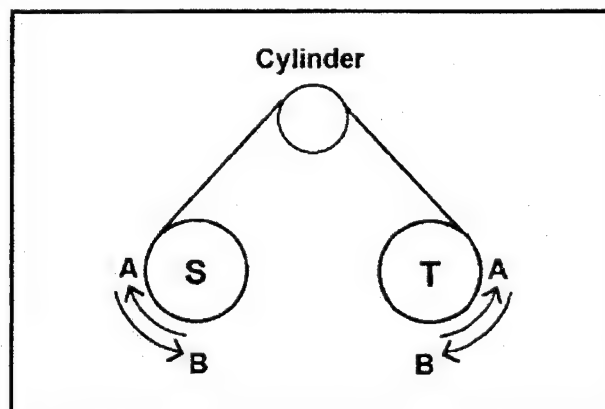
1. Confirm the power off.
2. Push the pinch roller by hand to be close to capstan.
3. Push the pinch solenoid by hand so that the pinch roller contacts capstan.
4. Loosen the two screws A.
5. Adjust the hole B so that gap T is within specification.
6. Tighten the two screws A.



## 2. Main Brake Torque Confirmation

<b>SPEC.</b>	Direction A : more than 100g Direction B : more than 20g
<b>TEST</b>	S Reel, T Reel
<b>MODE</b>	Eject (Power OFF)
<b>TOOL</b>	VFK71, VFK1191, VFK1152

1. Confirm the power off.
2. Remove the Cassette Up Unit.
3. Install the adapter (VFK1152) to the torque gauge (VFK71).
4. Put the torque gauge on S Reel.
5. Turn the torque gauge to direction A until S Reel slips against brake.
6. Confirm the torque is within specification.
7. Put the torque gauge on T Reel.
8. Turn the torque gauge to direction A until T Reel slips against brake.
9. Confirm the torque is within specification.
10. Install the adapter (VFK1152) to the torque gauge (VFK1191).
11. Put the torque gauge on S Reel.
12. Turn the torque gauge to direction B until S Reel slips against brake.
13. Confirm the torque is within specification.
14. Put the torque gauge on T Reel.
15. Turn the torque gauge to direction B until T Reel slips against brake.
16. Confirm the torque is within specification.





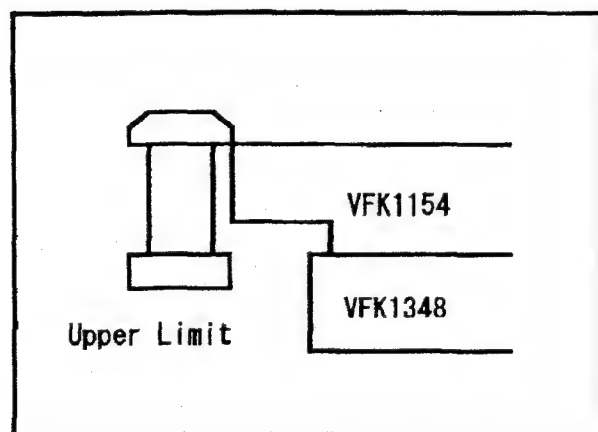
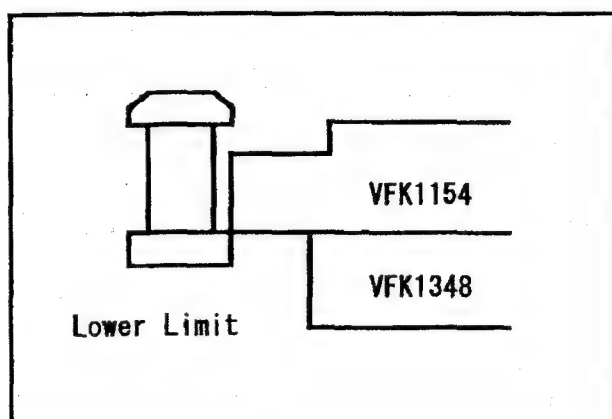
### 3. Post Height Preadjustment

<b>Mode</b>	EJECT (Power OFF)
<b>Tool</b>	VFK1348, VFK1154

1. Turn the power OFF and then set the tube\* to cover the sensor LED and place the unit in no tape loading mode.
2. Install the Mech. Neutral Plate and adjust each post height as shown in figure.

**Note. Lower\* :** Turn S4 and S5 posts 1 round more counterclockwise from lower limit position.

Post	Limit	Post Driver
S4	Lower*	VFK1149
T5	Lower*	VFK1149
T3	Lower	VFK1151 (2.5mm Nut Driver)
T4	Lower	VFK1151 (2.5mm Nut Driver)



### 4. Reel Torque Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	20±2mV
<b>TEST</b>	TP301(S), TP302(T), TG300(GND)
<b>ADJUST</b>	VR501(T), VR502(S)
<b>MODE</b>	PLAY
<b>M.EQ</b>	Digital Volt Meter

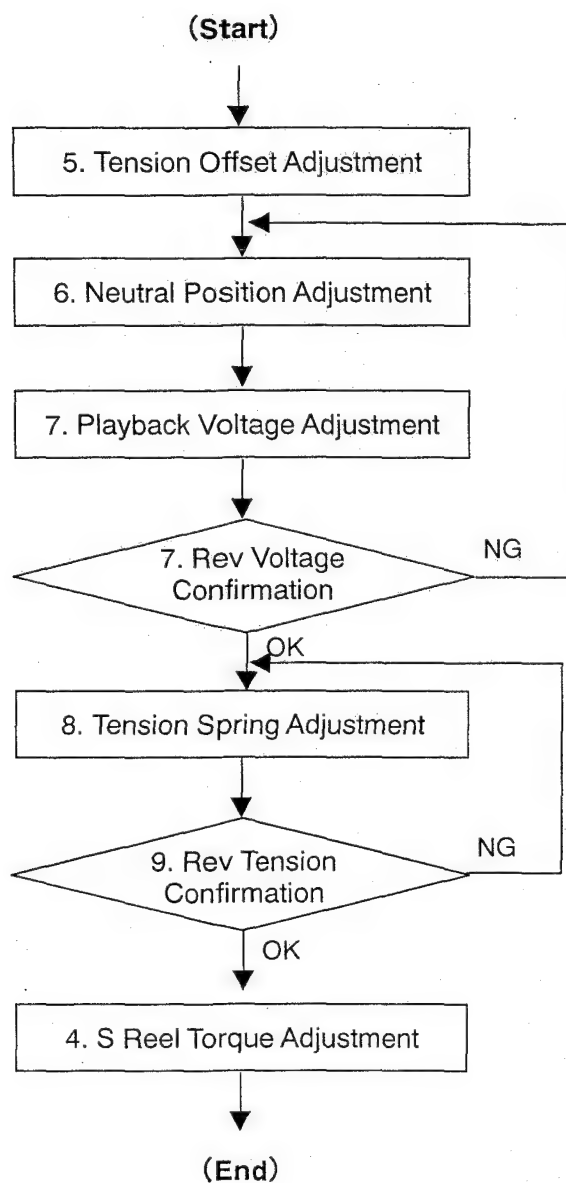
The S Reel Torque adjustment should be perform, after completed the "Tension Adjustment."

1. Confirm the power off and make a short-circuit between TP116 and TP505.
2. Turn the power ON and place the unit in no tape loading mode.
3. Hold the S-Reel by hand and press the PLAY key.
4. Adjust the VR502 so that the TP301 (for S Reel) is within specification.
5. Hold the T-Reel by hand and press the PLAY key.
6. Adjust the VR501 so that the TP302 (for T Reel) is within specification.
7. Make a open-circuit between TP116 and TP505.

**Note.**

1. Make a tube\* by yourself.

## Tension Adjustment Flowchart



## 5. Tension Offset Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	2.5 ± 0.05V
<b>TEST</b>	TP402
<b>ADJUST</b>	VR402
<b>MODE</b>	EJECT
<b>M.EQ</b>	Digital Volt Meter

1. Adjust the VR402 so that the DC voltage at TP402 is within specification.

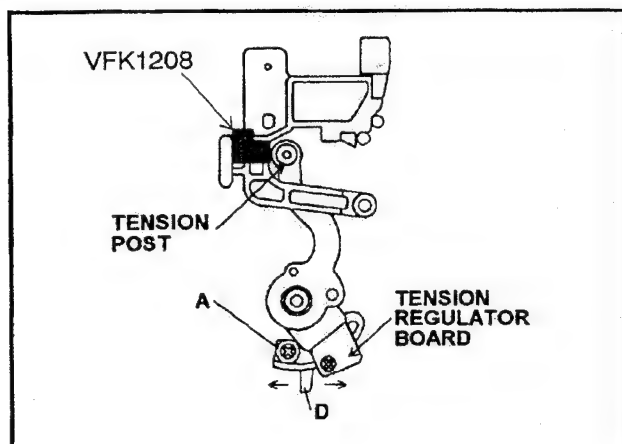
## 6. Neutral Position Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	$2.5 \pm 0.1V$
<b>TEST</b>	TP402
<b>ADJUST</b>	Sensor
<b>MODE</b>	STOP
<b>TOOL</b>	VFK1208
<b>M.EQ</b>	Digital Volt Meter

1. Remove the cassette up unit.
2. Set the tube\* to cover the sensor LED and place the unit in on tape loading mode.
3. Install the black spacer with hole (VFK1208) as shown in figure. Adjust the sensor position so that the TP402 voltage is within specification. To adjust, loosen the screw A and adjust the lever D.

### Note.

1. Make a tube\* by yourself.



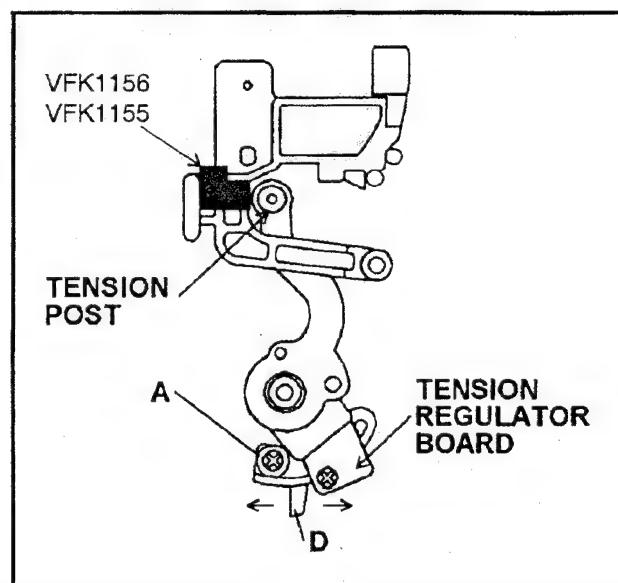
## 7. Play & Rev Tension Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	(PLAY) $3.8 \pm 0.05V$ (REV) $1.2 \pm 0.3V$
<b>TEST</b>	TP402
<b>ADJUST</b>	VR401
<b>MODE</b>	STOP
<b>TOOL</b>	VFK1156, VFK1155
<b>M.EQ</b>	Digital Volt Meter

1. Set the tube\* to cover the sensor LED and place the unit in no tape loading mode.
2. Install the black spacer (VFK1156) as shown in figure. Adjust the VR401 so that the TP402 voltage is within specification (PLAY). To adjust, loosen the screw A and adjust the lever D.
3. Install the gold spacer (VFK1155) instead of the black one. Confirm that the TP402 voltage is within specification (REV).

### Note.

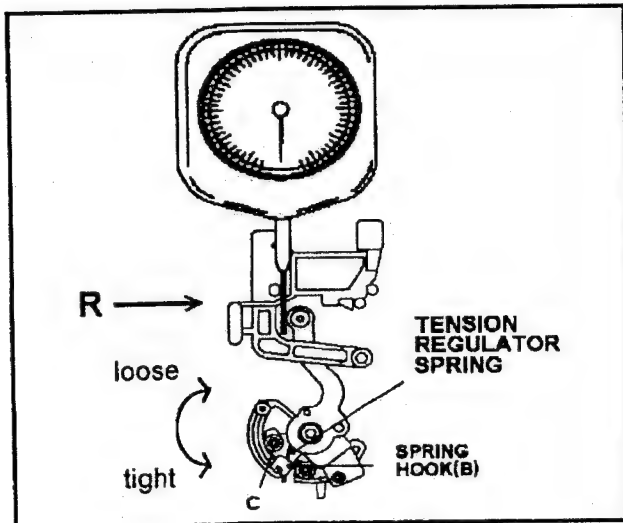
1. Make a tube\* by yourself.
2. In case that it is impossible to adjust within specification, readjust from Neutral Position Adjustment.



## 8. Tension Spring Adjustment

BOARD	Servo
SPEC.	11 ± 1g
TEST	TP402
ADJUST	Spring hook(B)
MODE	STOP
TOOL	VFK1188
M.EQ	Digital Volt Meter

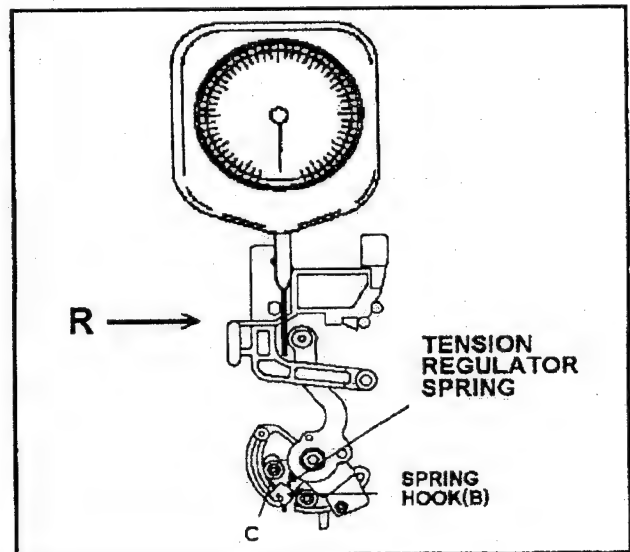
1. Remove the cassette up unit.
2. Set the tube\* to cover the sensor LED and place the unit in no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP402 is 3.8V(PLAY position).
4. Adjust the position of hook(B) so that the indication of gauge is within specification. To adjust hook(B), loosen the screw(C).



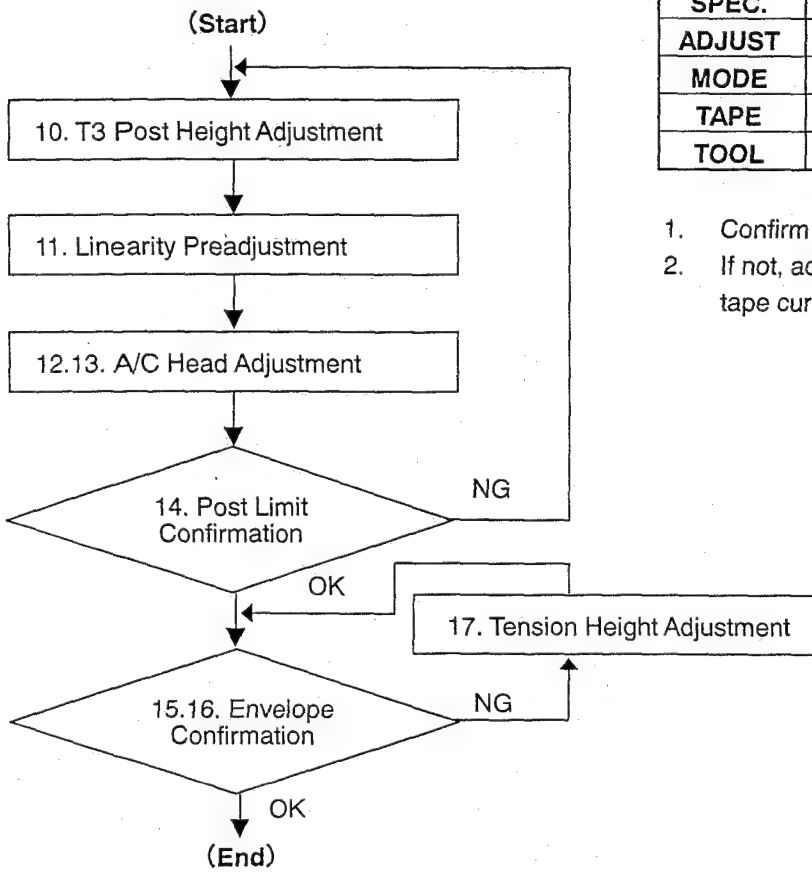
## 9. REV Tension Confirmation

BOARD	Servo
SPEC.	18 ± 2g
TEST	TP402
MODE	STOP
TOOL	VFK1188
M.EQ	Digital Volt Meter

1. Set the tube\* to cover the sensor LED and place the unit in no tape loading mode.
2. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP402 is 1.2V(REV position).
3. Confirm that the indication of gauge is within specification. If not, make the Tension Spring Adjustment again.



### Tape Path Adj. Flowchart

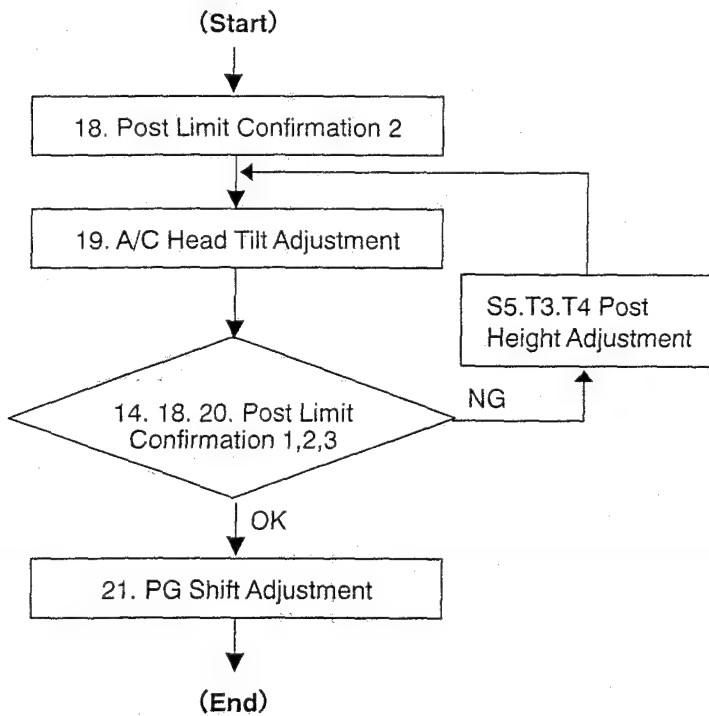


### 10. T3 Post Height Adjustment

<b>SPEC.</b>	No tape curl
<b>ADJUST</b>	T3 Post Height
<b>MODE</b>	PLAY
<b>TAPE</b>	Blank tape
<b>TOOL</b>	VFK1151

1. Confirm that the tape has no curl at T3 post.
2. If not, adjust the T3 post height so that no tape curl occurs to the tape edge.

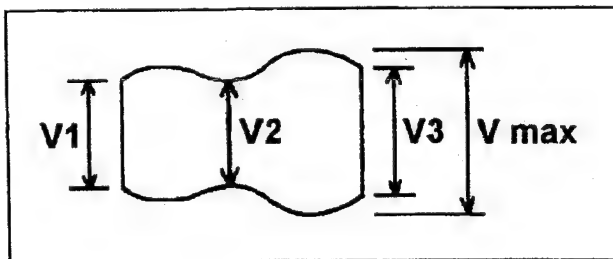
### Post Limit Confirmation Flowchart



## 11. Linearity Preadjustment

<b>SPEC.</b>	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$
<b>TEST</b>	TP500(VTR MAIN Board)
<b>ADJUST</b>	S1, T1 Post Height
<b>MODE</b>	PLAY(ATF)
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope
<b>TOOL</b>	VFK1149

1. Playback the alignment tape.
2. Adjust the S1 and T1 posts so that the envelope output is within specification.



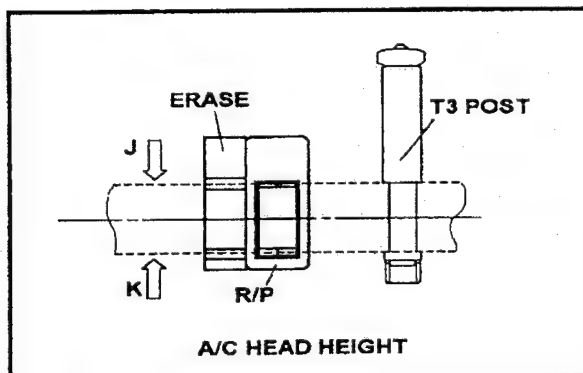
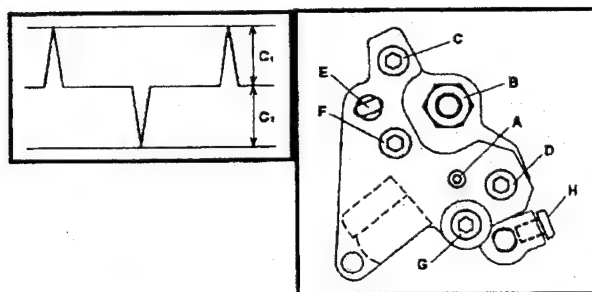
## 12. A/C Head Height Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	CTL Output : C1, C2 $\geq 220$ (mV)
<b>TEST</b>	TP107 : CTL Output
<b>ADJUST</b>	Screw B, H(A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope
<b>TOOL</b>	VFK1150, VFK1190

1. Monitor the TP107 on the Servo board.
2. Press the tape to the direction J or K and confirm that the CTL output level is decreased.
3. If direction J increases CTL output, loosen the screw H and adjust the screw B counterclockwise until CTL output is maximized.
4. If direction K increases CTL output, loosen the screw H and adjust the screw B clockwise until CTL output is maximized.
5. After tightening the screw H(2.0kg), confirm the level again.

### Note.

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).



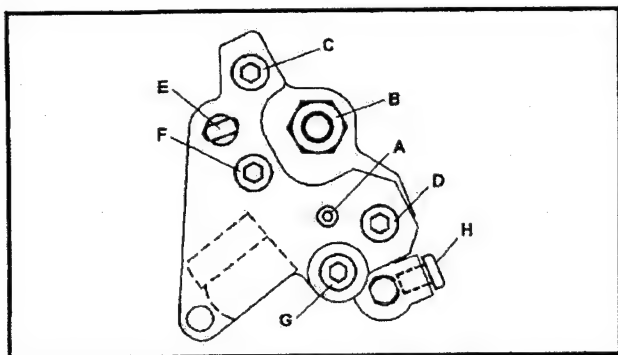
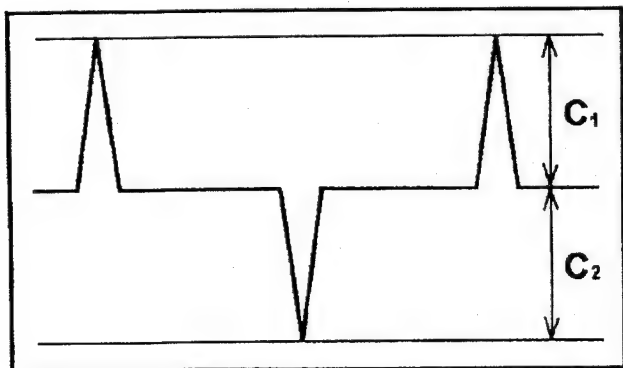
### 13. A/C Head Azimuth Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	CTL Output : C1, C2=C1 max, C2 max
<b>TEST</b>	TP107 : CTL Output
<b>ADJUST</b>	Screw F(A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>TOOL</b>	VFK1148
<b>M.EQ</b>	Oscilloscope

1. Monitor the TP107 on the Servo Board and adjust the screw F so that the TP107 is maximized.

#### Note.

1. Adjust alternately with other A/C head adjustments (Tilt, Height).



### 14. Post Limit Confirmation 1

<b>SPEC.</b>	Post limits shown in the table. No tape curl
<b>MODE</b>	PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>TOOL</b>	VFK1149 VFK1151

**Post Limit Table**

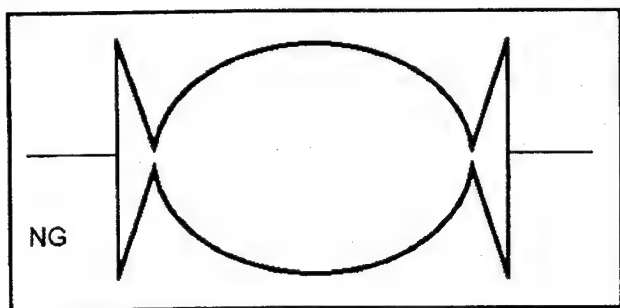
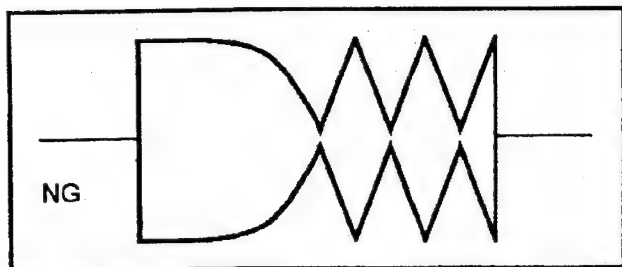
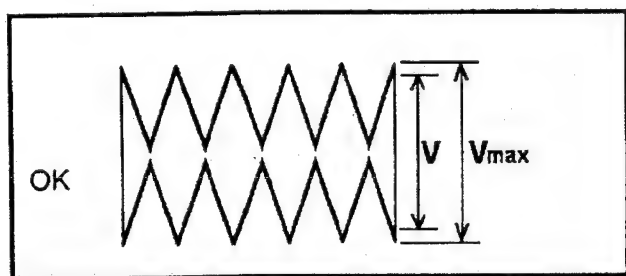
Post	Limit	Adjustment
S5 Post	Lower Limit or Free	S5 Post Height
S4 Post	Lower Limit	S4 Post Height
S1 Post	Upper Limit	Linearity
T1 Post	Upper Limit	Linearity
T3 Post	Lower Limit	T3 Post Height
T4 Post	Lower Limit or Free	T4 Post Height

1. Confirm the post limit of each post and adjust in case of need.

## 15. Envelope Confirmation 1

<b>SPEC.</b>	$V/V_{max} \geq 0.9$
<b>TEST</b>	TP500(VTR MAIN Board)
<b>MODE</b>	FF, REW, REV(PLAY & REW)
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope

1. Confirm the envelope in each mode.
2. If out of specification, adjust the S4 post height again.



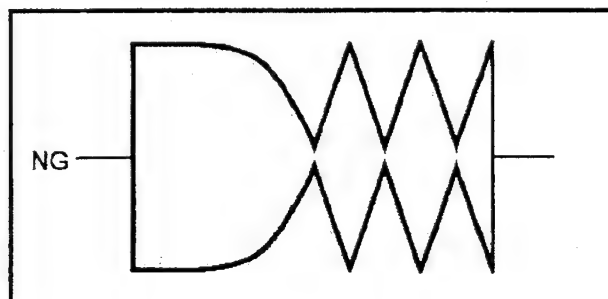
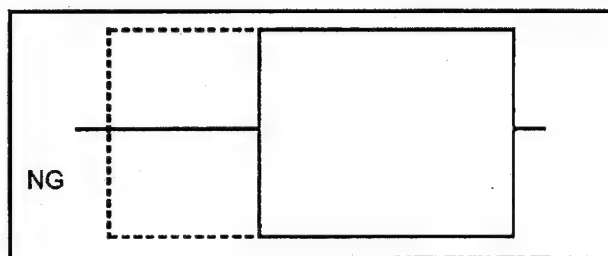
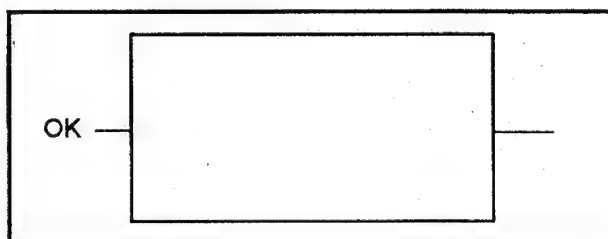
\* REVX1 Setting

- (1) Press the PLAY key repeatedly twice to enter the STILL mode.
- (2) Press the RESET and PLAY buttons at the same time.

## 16. Envelope Confirmation 2

<b>SPEC.</b>	Envelope appears immediately.
<b>TEST</b>	TP500(VTR MAIN Board)
<b>MODE</b>	REW/REV(PLAY & REW) → PLAY FF → PLAY LOADING → PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope

1. Confirm that the envelope appears immediately when the mode is switched from REW to PLAY, from REV to PLAY, from FF to PLAY and from LOADING to PLAY.
2. If out of specification, adjust the S4 post height again.



\* For the REV mode, refer to the item number 15.



## 17. Tension Height Adjustment

<b>SPEC.</b>	Envelope appears immediately.
<b>TEST</b>	TP500(VTR MAIN Board)
<b>ADJUST</b>	S1, T1, S4 Post
<b>MODE</b>	REW/REV(PLAY & REW) → PLAY FF → PLAY LOADING → PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope

- \* This adjustment must be done only when out of specification in Linearity Preadjustment, Envelope Confirmation 1 or 2.
1. Turn the S4 post 90 degrees counterclockwise and adjust S1 and T1 posts again.
  2. Confirm that the envelope appears immediately when the mode is switched from REW to PLAY, from REV to PLAY, from FF to PLAY and from LOADING to PLAY.
  3. If out of specification, repeat 1. again. Do not turn the S4 post more than 360 degrees.

## 18. Post Limit Confirmation 2

<b>SPEC.</b>	Post limits shown in the table. No tape curl
<b>MODE</b>	REV(PLAY & REW)
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	VFK1149
	VFK1151

**Post Limit Table**

Post	Limit	Adjustment
S5 Post	Free	S5 Post Height
S4 Post	Lower Limit or Free	S4 Post Height
S1 Post	Upper Limit	Linearity
T1 Post	Free	Linearity
T3 Post	Lower Limit	T3 Post Height
T4 Post	Lower Limit	T4 Post Height

1. Confirm the post limit of each post and adjust again in case of need.

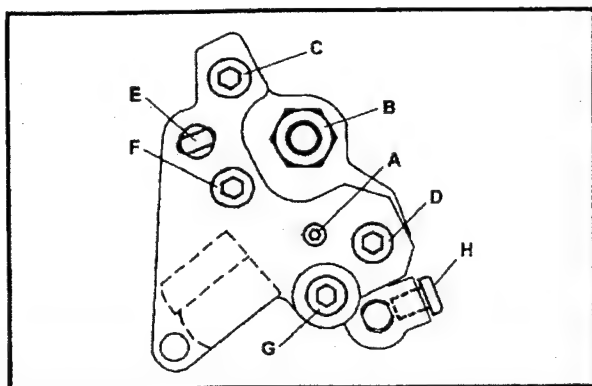
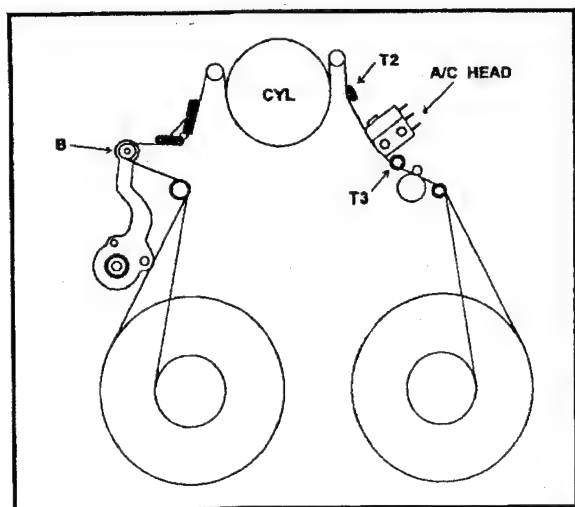
## 19. A/C Head Tilt Adjustment

<b>SPEC.</b>	No tape curl, Lower limit at T3 post
<b>ADJUST</b>	Screws A and G(A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	Blank tape
<b>TOOL</b>	VFK1148, VFK1178

1. Confirm that the screw (G) is tightened with 1.0kg of torque.
2. Play back the tape and adjust the A/C head tilt with screw (A) so that the tape path has lower limit at T3 post.

### Note.

1. Screw(A) : Clockwise : Tape goes up at T3 post. Counterclockwise : Tape goes down.
2. The final touch of the adjustment must be turned clockwise.
3. Adjust alternately with each A/C head adjustment(Azimuth, Height).



## 20. Post Limit Confirmation 3

<b>SPEC.</b>	Post limits shown in the table. No tape curl
<b>MODE</b>	FF, REW
<b>TAPE</b>	L cassette(beginning or ending portion) NTSC : VFM3580KL PAL : VFM3680KL
<b>TOOL</b>	VFK1149 VFK1151

**Post Limit Table**

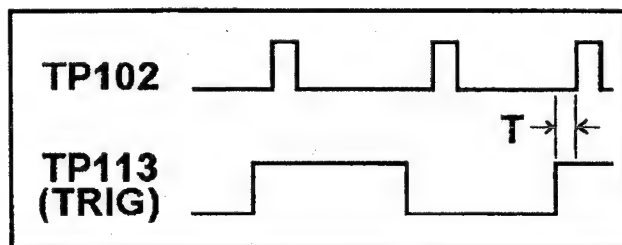
Post	Limit	Adjustment
S5 Post	Free	S5 Post Height
S4 Post	Lower Limit or Free	S4 Post Height
S1 Post	Upper Limit	Linearity
T1 Post	Free	Linearity
T3 Post	Free	T3 Post Height
T4 Post	Lower Limit or Free	T4 Post Height

1. Confirm Post Limit Confirmation 1 and 2 playing back beginning or ending portion of L cassette.
2. Confirm the post limit of each post and adjust again in case of need.
3. If T3 post is adjusted, confirm that the tape has no curl at T3 post when loading or unloading.

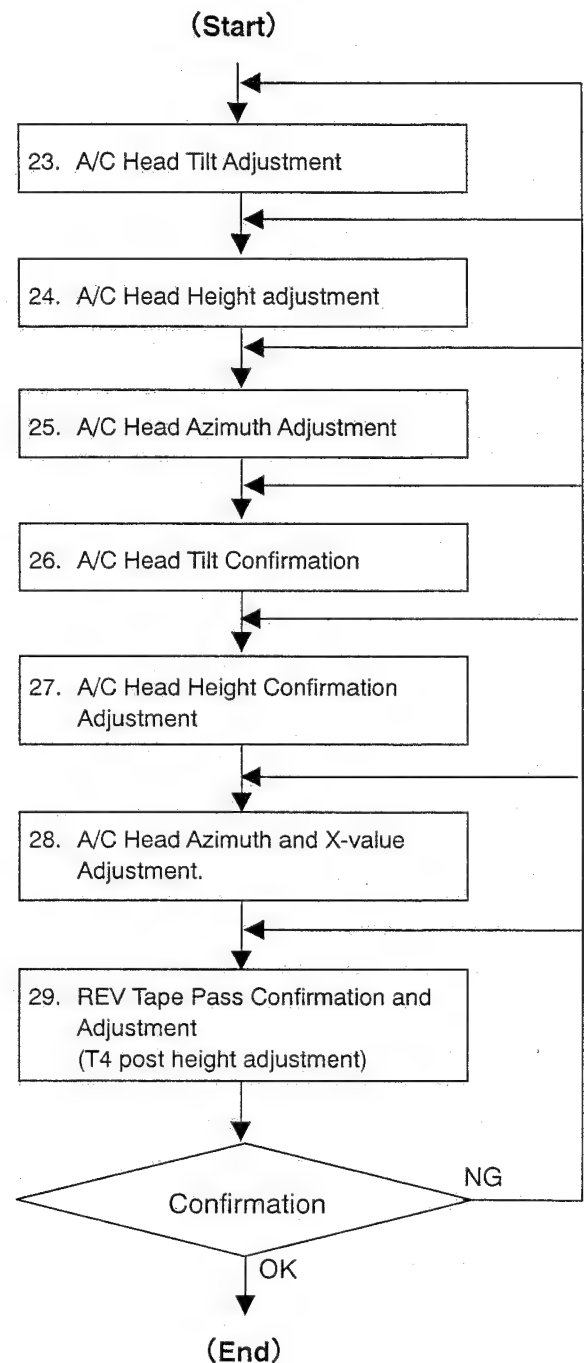
## 21. PG Shifter Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	$126.3 \pm 2.5 \mu\text{s}$
<b>TEST</b>	TP113, TP102
<b>ADJUST</b>	VR101
<b>MODE</b>	PLAY
<b>TAPE</b>	NTSC : VFM3580KL PAL : VFM3680KL
<b>M.EQ</b>	Oscilloscope

1. Adjust the VR101 so that the T is within specification (Trigger : TP113).



## A/C Head Adj. Flowchart

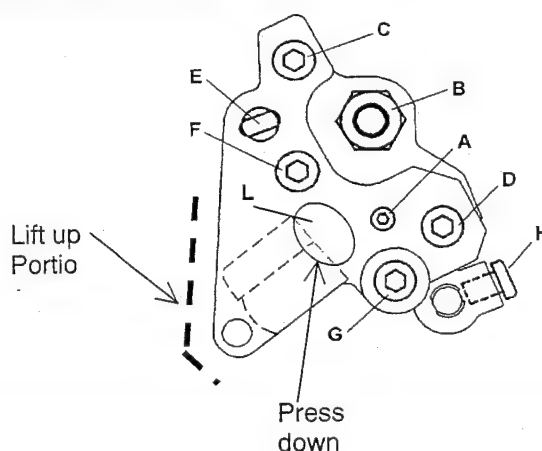
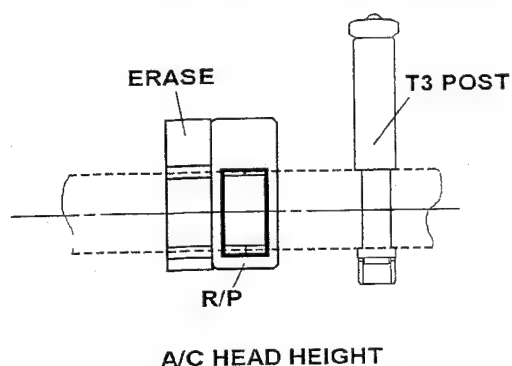


## 22. A/C Head Adjustment Method

Adjustment Item	SCREW	Adjustment Method	Torque
Tilt adjustment	A	Tighten direction . . . Decrease CUE Loosen direction . . . Increase CUE	
Height adjustment	B	Tighten direction . . In case of increase CTL, when A/C Head Press down. Loosen direction . . In case of increase CTL, when A/C Head lift up.	
Azimuth adjustment	F	Phase is adjusted by screw F	
X-value adjustment	C D	Adjust X-value by VFK0357 at Hole (E), then tighten the screw (C) and (D) to fix A/C Head horizontal position.	2.5Kg.cm
Fixed Tilt and Azimuth	G	Screw (G) is always tighten during adjustment except Tilt and Azimuth.	1.0Kg.cm
Fixed height	H	After height adjustment, tighten the screw (H) to fix height of A/C Head.	

SCREW	Tool for adjustment
A	VFK1178 ( 0.89mm Hex Driver)
B	VFK1150 ( 5.5mm Tool for adjustment)
F	VFK1148 (1.5mm Hex Driver)
C,D,G	VFK1209 ( Torque Driver ) VFK0912 ( 1.5mm Post Axis Driver)
H	VFK1190 ( 1.5mm L type of Hex Wrench)

1. Each adjustment of A/C Head should be perform under the screw (G) tightened.
2. Confirm the screw (A) does not loosen, before execute the A/C Head Tilt adjustment. The screw (A) should be always touch to top of A/C Head.
3. Be careful the tape damage at T3 Post, when adjust tilt of A/C Head.
4. When the height of A/C Head is adjusted by Nut (B), first the screw (H) should be loosen. And after height adjustment finished, tighten the screw (H) lightly.
5. Each adjustment of A/C Head should be finished at the condition of turn the each adjustment screw tighten direction. And hit the portion (L) lightly for remove the distortion.
6. Adjust alternately each A/C Head adjustment with Envelope Waveform adjustment.



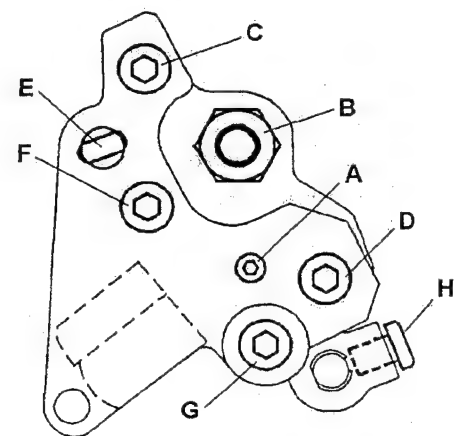
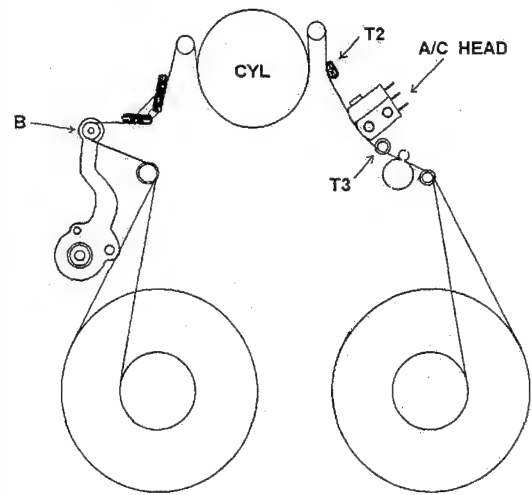
### 23. A/C Head Tilt Adjustment

<b>SPEC</b>	Lower limit at T3 Post No tape curl
<b>ADJUSTMENT</b>	SCREW A and G (A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	Blank Tape
<b>M.EQ</b>	VFK1148, VFK1178(Hex Driver)

1. Play back the tape and adjust **screw(A)** for adjustment of tilt of A/C Head so that the tape path has lower limit without curl at T3 post.
2. To adjustment, loosen the screw (G) and make curl on tape at lower flange of T3 post by screw (A). And tighten screw (A) accordingly for find the point of curl disappeared. After finish adjustment for screw (A), tighten the screw (G) is tightened with 1.0Kg/cm of torque.

#### (NOTE)

1. In case of turn clockwise screw (A).  
→ Tape goes up at T3 post.  
In case of turn counter-clockwise screw (A).  
→ Tape goes down at T3 post.
2. When screw adjustment finished, with each adjustment screw on A/C Head should be finished tighten direction. And confirm that the screw does not loosen.
3. Adjust and confirmation should be performed alternately with each A/C head adjustment(Azimuth and Height).



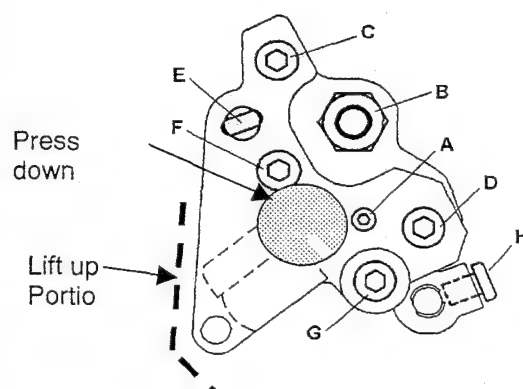
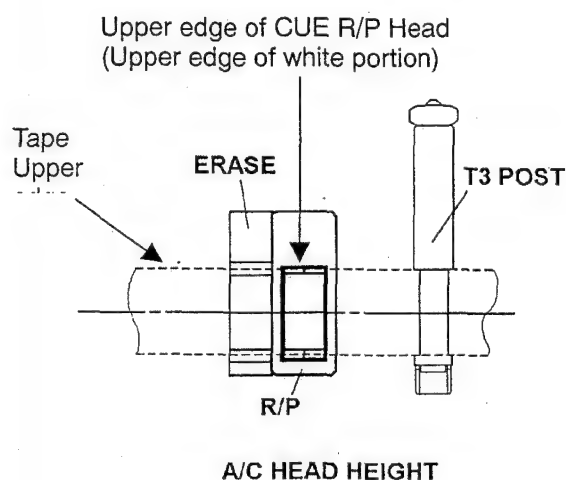
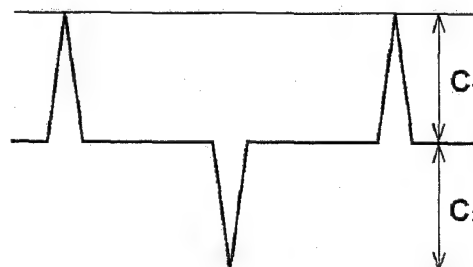
## 24. A/C Head Height adjustment

BOARD	SERVO
SPEC	CTL Output ( $C_1, C_2 \geq 220\text{mV}$ )
TEST POINT	TP107:CTL
ADJUSTMENT	SCREW B and H (A/C Head)
MODE	PLAY
TAPE	VFM3580KM, VFM3680KM
M.EQ	Oscilloscope
TOOL	VFK1150(Nut Driver) VFK1190(Hex Wrench)

1. Observe the CTL output (**TP107**) on the Servo board.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the **CTL** output level is **decreased**.
3. If increases CTL output, when press the A/C Head. Loosen the **screw H** and adjust the **screw B counterclockwise** until CTL output is maximized.
4. If increases CTL output, when lift up the A/C Head. Loosen the **screw H** and adjust the **screw B clockwise** until CTL output is maximized.
5. After tightening the **screw H(2.0kg)**, confirm the level again.

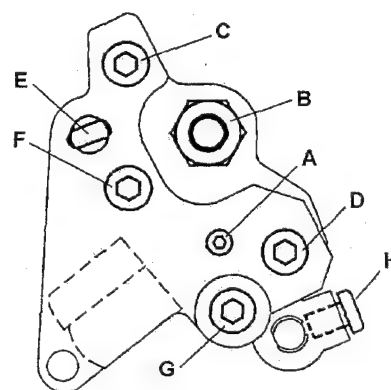
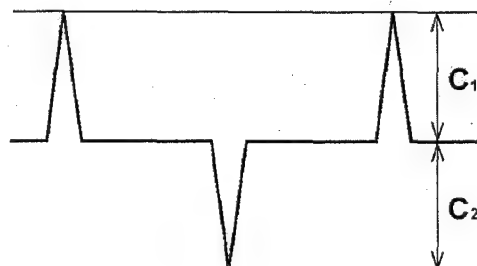
### < NOTE >

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).



## 25. A/C Head Azimuth Adjustment

<b>BOARD</b>	SERVO
<b>SPEC</b>	CTL Output: C1, C2 = C1 max. C2 max
<b>TEST POINT</b>	TP107:CTL
<b>ADJUSTMENT</b>	SCREW F (A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	VFM3580KM, VFM3680KM
<b>M.EQ</b>	Oscilloscope
<b>TOOL</b>	VFK1148(Hex Driver)



1. Observe the CTL output (TP107) on the Servo Board.
2. To adjustment, loosen the screw (G) and adjust screw (F) so that the CTL output become maximum.
3. Tighten screw (G) with 1.0Kg torque.

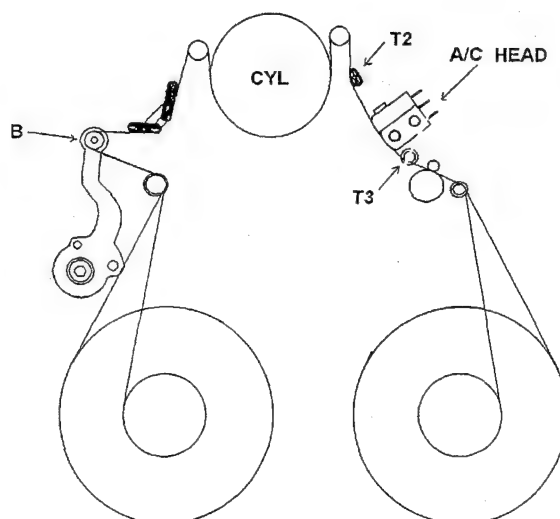
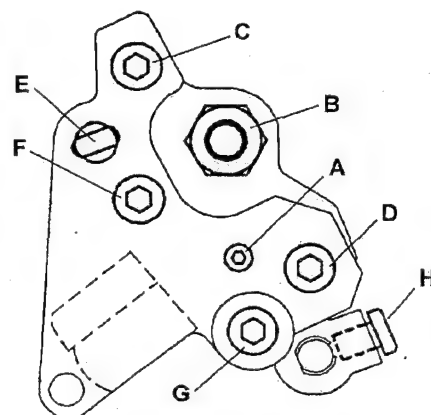
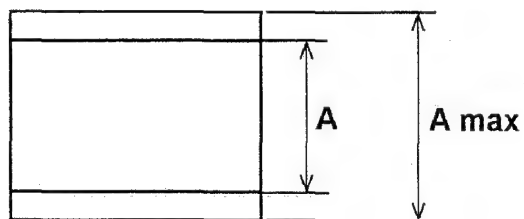
### < NOTE >

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).

## 26. A/C Head Tilt Confirmation

SPEC	$A/A_{max} \geq 0.8$
TEST POINT	TP505:CUE AUDIO(LCD Board)
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	VFM3580KM, VFM3680KM
M.EQ	Oscilloscope
TOOL	VFK1178, VFK1148(Hex Driver)

1. Playback the CUE portion(6kHz) of the Alignment tape.
2. Confirm that the **screw G** and **H** are not loosened.
3. Push the tension arm follow the arrow (B) direction as shown in figure as range of T2 post does not move. And confirm that the CUE output level is within specification.
4. If out of specification, loosen the **screw G** and adjust the **screw A**, then tighten the **screw G** with **1.0kg** torque.
5. The final touch of the adjustment must be turned clockwise. After this adjustment, confirm that the screw A is not loosened.
6. If adjust the screw A, Confirm that the tape pass condition follow Post Limit Confirmation procedure (item 1-14).

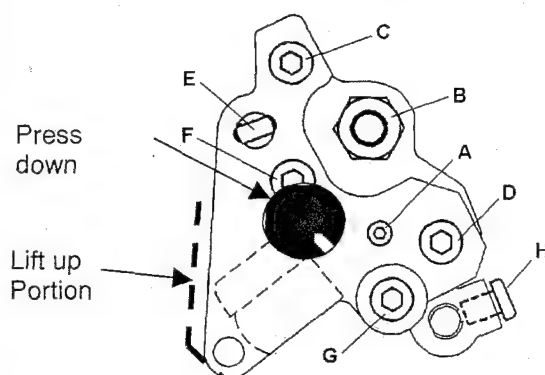
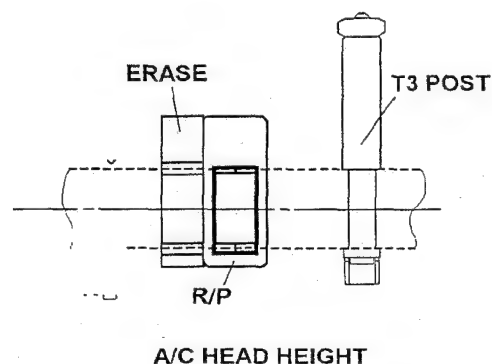
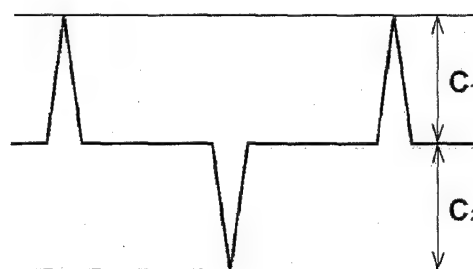
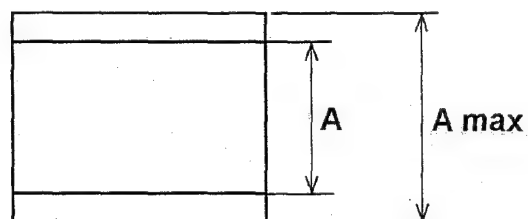




## 27. A/C Head Height Confirmation

<b>SPEC</b>	$A \geq 0.95 \times A_{max}$ , $C_1, C_2 \geq 220mV$
<b>TEST POINT</b>	TP505 CUE AUDIO(LCD BOARD) TP107 CTL(SERVO BOARD)
<b>ADJUSTMENT</b>	SCREW B and H(A/C Head)
<b>MODE</b>	PLAY
<b>TAPE</b>	VFM3580KM, VFM3680KM
<b>M.EQ</b>	Oscilloscope
<b>TOOL</b>	VFK1150(Nut Driver) VFK1190(Hex Wrench)

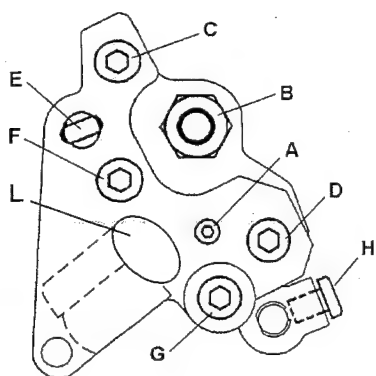
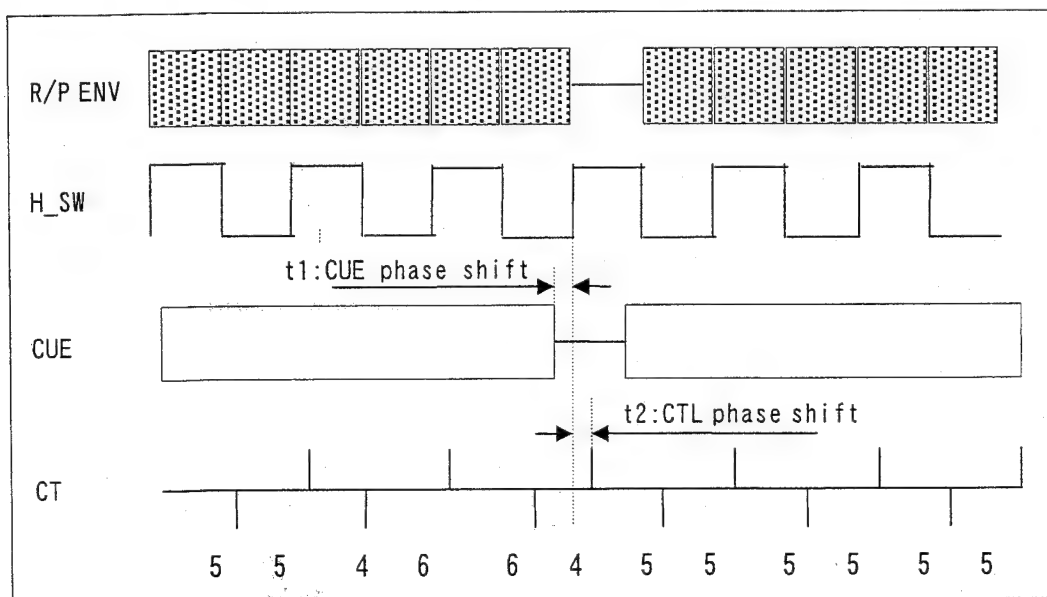
1. Playback the CUE portion(6kHz) of the Alignment tape.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CUE output level at TP505 does not **increased**.
3. If increases CUE output, A/C Head Height adjustment performed. And also confirm that the CTL output level.
4. If adjust the height of A/C Head, Azimuth also changed. Therefore adjust and confirm alternately Height and Azimuth of A/C Head.
5. After screw (H) is tightened, height and tilt of A/C Head are changed. Therefore confirmation of specification must be done after tightening the screw (H).



## 28. A/C Head Azimuth and X-value Adjustment.

<b>SPEC.</b>	AS shown in the below figure. -250us $\leq$ t1 $\leq$ +250us -250us $\leq$ t2 $\leq$ +250us	<b>TEST POINT</b>	TP500:R/P ENV(RF Board) TP300:R/P HSW (RF Board) TP505:CUE AUDIO (LCD Board) TP107:CTL (SERVO Board)
<b>ADJUSTMENT</b>	A/C Head each screws	<b>M.EQ</b>	Oscilloscope
<b>MODE</b>	Play	<b>TOOL</b>	VFK0357(Eccentric Driver)
<b>TAPE</b>	VFM3582KM, VFM3682KM		

1. Playback the X-value alignment tape.
2. Adjust A/C Head Azimuth (refer to Azimuth adjustment procedure) so that the CTL and Lack part of CUE(t2) is match in the phase.
3. Confirm the lack track of envelope, and select the HSW correspond with it ( The lack track is correspond HSW high with L ch).
4. Adjust X-value so that the reference of HSW and CTL trigger (select the next trigger at duty 6 to 4 portion: refer to below figure) are match in the phase(t1). To adjust X-value, loosen the screw C and D, adjust the hole E by VFK0357. After adjustment tighten the screw C and D with 2.5Kg torque. At this time adjust the phase simultaneously with Azimuth so that the CTL and CUE phase is kept.
5. Hit the top plate ( portion L as shown in below figure ) of A/C Head lightly by a pointed end of Eccentric driver , then confirm the phase is not shifted finally.



## 29. REV Tape Pass Confirmation and Adjustment (T4 post height adjustment)

<b>SPEC.</b>	$C1, C2 \geq Cp1, Cp2 \times 0.75$ Lower limit at T3 post on REV mode	<b>TAPE</b>	VFM3580KM, VFM3680KM
<b>TEST POINT</b>	TP30(SERVO:F1)	<b>M.EQ</b>	Oscilloscope
<b>ADJUSTMENT</b>	T4 post height	<b>TOOL</b>	VFK1151(Nut Driver)
<b>MODE</b>	REV×1		

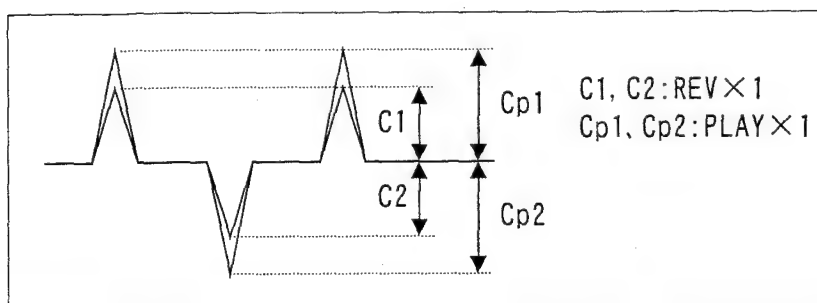
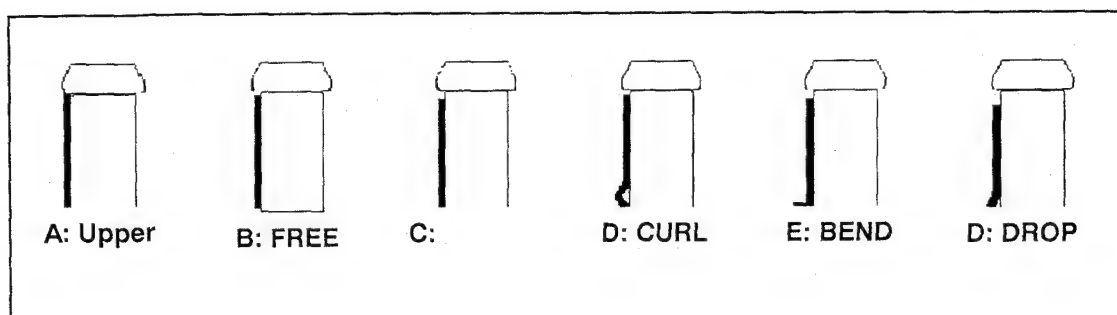
1. Place unit into REV mode, and confirm the post limit and CTL signal are in the specification. IF not, adjust T4 post follow the below procedure.
2. Turn the Nut of T4 post clockwise or counterclockwise follow the tape limit condition at T3 post. The maximum rotation angle is 90 degree.
3. Place unit into REV X1 mode and confirm the CTL output level is become more than 75% on play mode.  
Confirm the tape pass limit become lower limit at T3 post and the tape does not have curl at T3 and T4 post.
4. However out of specification, adjust T4 post height follow the Post Height Pre-adjustment procedure.

### T4 Nut adjustment direction

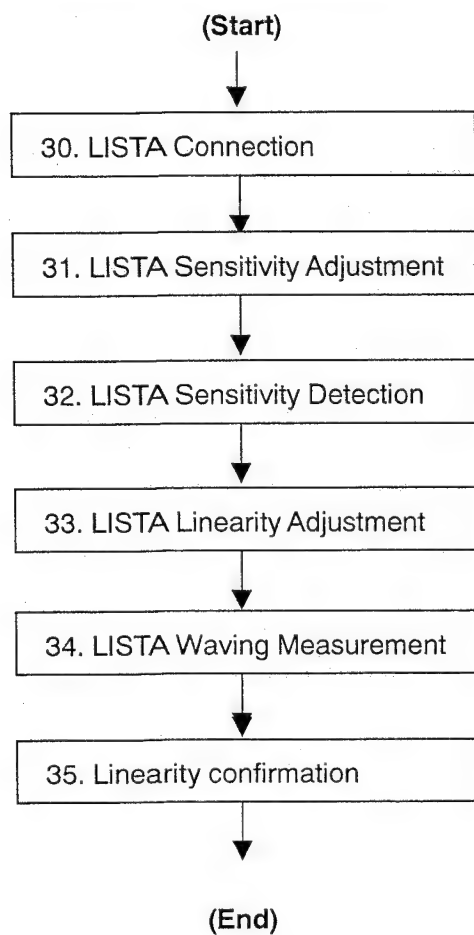
Direction of adjustment nut of T4 post	CTL level on REV mode	Lower limit at T3 post On REV mode
Tighten direction	Increase	Tape touch to strong
Loosen direction	Decrease	Tape touch to weak

### Post Limit

Post Name	Tape limit					
	A	B	C	D	E	F
T3 Post	×	×	○	×	×	×
T4 Post	○	○	○	×	×	×



## Linearity Adjustment Flowchart



### 30. LISTA Connection and Boot Up

<b>TEST POINT</b>	TP115 : ATF ERR (SERVO Board) TP113 : R/H HSW (SERVO Board) TG300 : GND (SERVO Board)
<b>M.EQ</b>	P/C (AD Board should be installed), Oscilloscope
<b>TAPE</b>	NTSC : VFM3581KL, PAL : VFM3681KL
<b>TOOL</b>	VFK1481 (LISTA Software), VFK1186 (LISTA Cable)

1. Connect the LISTA Cable to A/D board on PC.
2. Connect the Clips of LISTA Cable to test point on Servo Board as follow as below.
  - ① ATF : TP115
  - ② HSW : TP113
  - ③ GND : TG300
3. Boot up the LISTA software on DOS mode.

★ Install and Boot up.

All files on the floppy disk (VFK1481) copy to created directly on PC (i.e. C:\LISTA).  
Type "LISTA" and press ENTER Key, then boot up LISTA software.

4. Select the item "DVC PRO" then "AJ-D200" for selected model on the menu.
5. After selected model, appeared alignment tape data on the screen for select the Serial number on the alignment tape. But if LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select item "<4> Alignment Tape" for entry the data on the attachment sheet, which is enclosed of alignment tape.

Linearity monitor system of track  
using ATF error signal for DVCPRO

-- L I S T A   P R O   --  
[Service Use]

<<< FORMAT SELECT >>>

<1> DVCPRO

<2> DVCPRO 4X

<3> DVCPRO 50

<4> Quit

Move:Cursor key    Select:[ENTER] key

Linearity monitor system of track  
using ATF error signal for DVCPRO

-- L I S T A   P R O   --  
(for DVCPRO VTR) [Service Use]

<<< VTR SELECT >>>

<1> A J - D 7 5 0

<2> A J - D 7 0 0

<3> A J - D 2 0 0

Move:Cursor key    Select:[ENTER] key

## How to Entry the Attachment Data of Alignment Tape

1. Select the item "<4> Alignment Tape" on the main menu to the LISTA software.
2. Select the item "<2> ENTRY" on the alignment tape menu.
3. After display the screen of "<< Alignment Tape Data Entry >>", first input the Serial number follow the printed number on the tape label. And input the number "0" or "1" for select the PAL/NTSC. And after that for entry the tape type, in case of DVCPRO input to "0", in case of DV input to "1".
4. After select the Tape Type, the frame for input the DATA and CHECK SUM appeared on the screen, input the numerical value in numerical order on the data sheet, which are enclosed with alignment tape. If input the wrong number, appear the error message on the screen, then confirm that the data on the sheet.
5. After entry the data, select "<1> SELECT" on the Alignment Tape menu and select the serial number of the alignment tape.

<< Alignment Tape Data Entry >>

Serial No. 0596003 (NTSC)

18um

[1]	- 0.1
[2]	0.1
[3]	0.0
[4]	0.2
[5]	0.6
[6]	0.5
[7]	0.7
[8]	0.9
[9]	1.0
[10]	0.8

[11]	0.7
[12]	1.0
[13]	0.7
[14]	0.5
[15]	0.2
[16]	- 0.5
[17]	- 0.3
[18]	- 0.3
[19]	- 0.1
[20]	- 0.6

[21]	- 0.4
[22]	- 0.2
[23]	- 0.7
[24]	- 0.6
[25]	- 0.7
[26]	- 0.3
[27]	- 0.4
[28]	- 0.4
[29]	- 0.6
[30]	- 0.3

[31]	- 0.4
[32]	- 0.6
[33]	- 0.3
[34]	- 0.2
[35]	- 0.1
[36]	- 0.3
[37]	- 0.1

[CS]	- 0.6
------	-------

### 31. LISTA Sensitivity Adjustment

<b>SPEC.</b>	Sensitivity : 100 ± 10 (mV/μm)
<b>MODE</b>	PLAY
<b>TEST POINT</b>	TP115 : ATF ERR (SERVO Board) TP113 : HSW (SERVO Board) TG300 : GND (SERVO Board)
<b>ADJUSTMENT</b>	EVR (ATF Gain) : refer to below sentence about how to adjustment
<b>TAPE</b>	NTSC : VFM3581KL, PAL : VFM3681KL

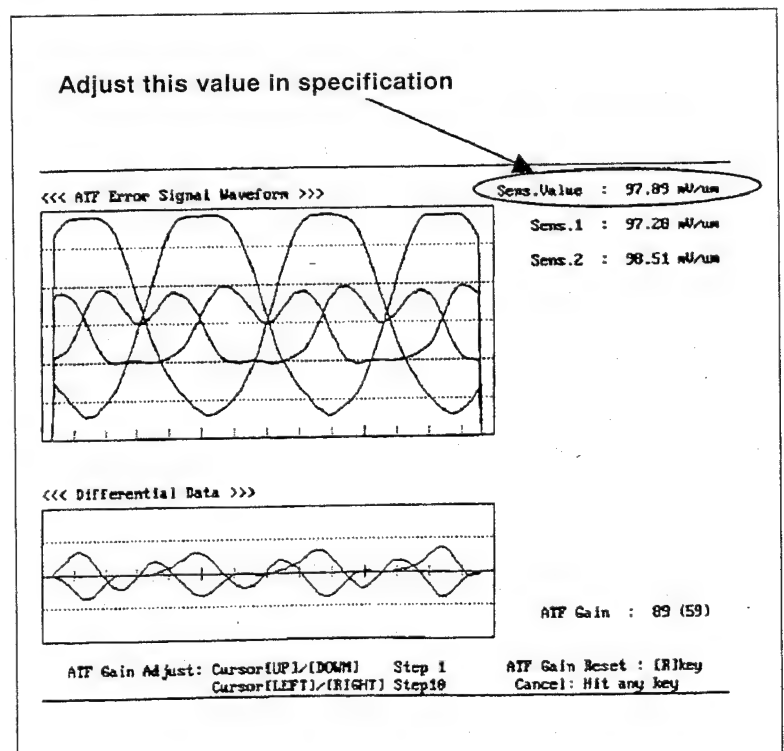
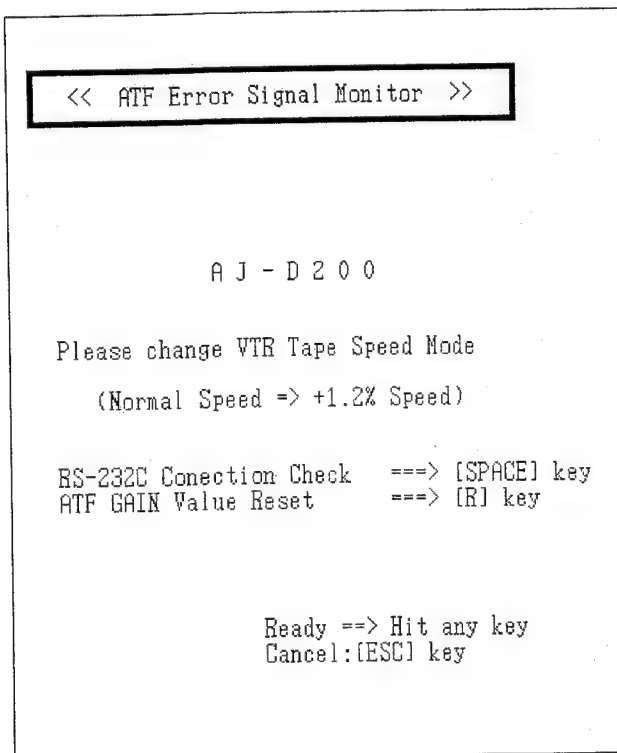
1. Set up the EVR tool according to Connection figure at the beginning of Electrical Adjustments.
2. Confirm that the power is turned off and make a short-circuit between **TP902** and **TP116** to place the unit in +1.2% Playback mode.
3. After turn on Power and Playback an alignment tape.
4. Select the "<6> ATF Error Signal Monitor" on the main menu. And than press "SPACE" key for executes initializes.
5. Press the "0 (zero)" key for download the ATF GAIN DATA from the unit.
6. Press the "ENTER" key, sensitivity value as real time and waveform appears on the screen as shown in figure.
7. Press the key in PC so that the sensitivity value which is described as **Sens, Value** is within specification.

Note: Data is changed 10 steps by press [→] or [←] keys.

Data is changed 1 steps by press [↓] or [↑] keys.

After press arrow key, screen displays disappeared momentarily during calculation on LISTA software.

8. After the adjustment, press ESC key to exit to the menu.



### 32. LISTA Sensitivity Detection

<b>BOARD</b>	Servo
<b>SPEC.</b>	Sensitivity : $100 \pm 10(\text{mV}/\mu\text{m})$
<b>TEST</b>	TP115 : ATF Error (Servo Board) TP113 : HSW_R (Servo Board) TG300 : GND (Servo Board)
<b>MODE</b>	+1.2% Playback
<b>TAPE</b>	NTSC : VFM3582KL (LISTA) PAL : VFM3682KL (LISTA)
<b>M.EQ</b>	LISTA

1. Confirm that the power is turned off and make a short-circuit between TP902 and TP116 to place the unit in +1.2% Playback mode.
2. Playback an alignment tape.
3. Select <1> Sensitivity Measurement menu and start the sensitivity detection.
4. Confirm that the sensitivity value is within specification.
5. If out of specification, repeat the steps 3 and 4.
6. If still out of specification, make "LISTA Sensitivity Adjustment again.

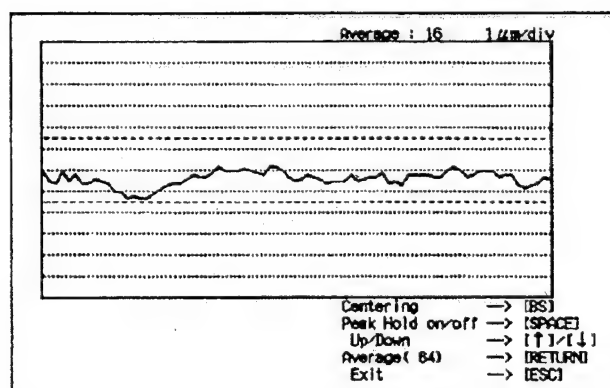
### 33. LISTA Linearity Adjustment

<b>BOARD</b>	Servo
<b>SPEC.</b>	Linearity: Less than $3\mu\text{m}$
<b>TEST</b>	TP115 : ATF Error (Servo Board) TP113 : HSW_R (Servo Board) TG300 : GND (Servo Board)
<b>ADJUST</b>	S1, T1 Post Height
<b>MODE</b>	LISTA mode
<b>TAPE</b>	NTSC : VFM3582KL (LISTA) PAL : VFM3682KL (LISTA)
<b>TOOL</b>	VFK 1149
<b>M.EQ</b>	LISTA

1. Confirm that the power is turned off and make a short-circuit between TP902, TP116 and TP101 to place the unit in LISTA mode.
2. Playback an alignment tape.
3. Select <2>Linearity Measurement menu, and display the linearity.
4. Adjust the S1 post height and T1 post height so that the linearity is within specification.

Note.

1. Lower part of the monitor shows the lead.
2. Current linearity is red line.





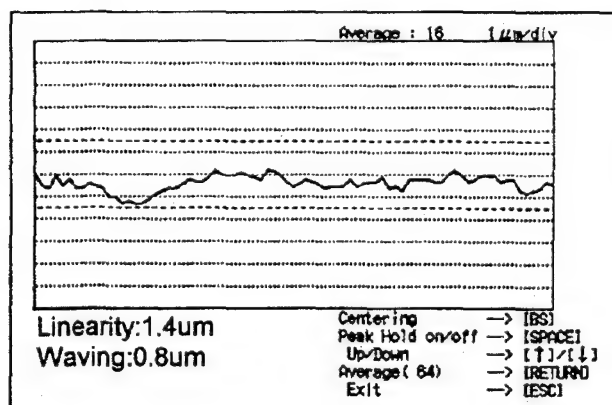
### 34. LISTA Waving Measurement

<b>BOARD</b>	Servo
<b>SPEC.</b>	Waving : Less than 1.5 $\mu$ m
<b>TEST</b>	TP115 : ATF Error(Servo Board) TP113 : HSW_R(Servo Board) TG300 : GND(Servo Board)
<b>ADJUST</b>	S1, T1 Post Height
<b>MODE</b>	LISTA mode
<b>TAPE</b>	NTSC : VFM3582KL(LISTA) PAL : VFM3682KL(LISTA)
<b>TOOL</b>	VFK1149
<b>M.EQ</b>	LISTA

1. Confirm that the power is turned off and make a short-circuit between TP902, TP116 and TP101 to place the unit in LISTA mode.
2. Playback an alignment tape.
3. Select <2>Linearity Measurement menu, and display the linearity.
4. After linearity is displayed, press the SPACE key to hold the peak (Peak-Hold) during 30 seconds.
5. After Peak-Hold, press the SHIFT key and key together to display the measurement value and confirm that the value is within specification.
6. After the adjustment, press ESC key to exit to the menu.

#### Note.

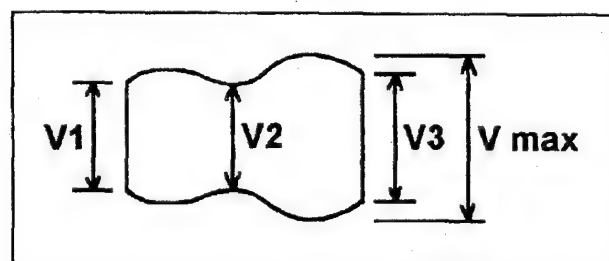
1. Confirm that waving value is almost the same from the entrance to the exit.
2. If out of specification because of wrong post limits, adjust the S1 and T1 posts again.



### 35. Linearity Confirmation

<b>SPEC.</b>	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$
<b>TEST</b>	TP500(VTR MAIN Board)
<b>MODE</b>	PLAY(ATF)
<b>TAPE</b>	Blank Tape
<b>TOOL</b>	VFK1149
<b>M.EQ</b>	Oscilloscope

1. Record the color bar signal.
2. Play back the recorded portion and confirm that the envelope output is within specification.



# SECTION 4

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## ELECTRICAL ADJUSTMENTS

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## 1. POWER

### 1-1. DC Voltage Adjustment

ITEM	TEST	ADJUST	SPEC.
3.15V ADJ.	*TP9	VR5	$3.15 \pm 0.01V$
3.6V ADJ.	TP4	VR3	$3.6 \pm 0.05V$
5.0V ADJ.	TP5	VR2	$5.0 \pm 0.05V$
5.6V ADJ.	TP3	VR1	$5.6 \pm 0.05V$
-5.6V ADJ.	TP8	VR6	$-5.6 \pm 0.51V$
9.0V ADJ.	TP6	VR4	$9.0 \pm 0.05V$
48V Confirm	TP9	---	$44.0 \pm 4.0V$

#### Note:

\*The test point of 3.15V adjustment is on the VTR MAIN C.B.A., other TP and VR are on the POWER C.B.A. (GND : TP2)

### <<PC-EVR Operation>>

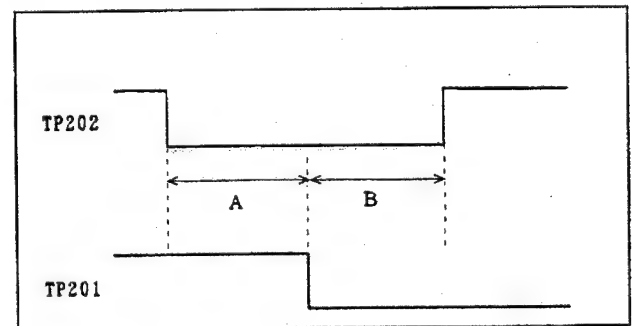
1. Select Start Adjustment D223N and press Enter.
2. Select "PAL or NTSC" and press Enter.
3. Press F1(File) key.
4. Select "HD Read" on \*Auto File and press Enter.
5. Select adjustment item of Sub Title on <Select File Read>.
6. Press "F5 (Mode)" key and set "1 Step or All Steps" mode.
7. Select adjustment item by  $\uparrow$  or  $\downarrow$  key and press Enter.
8. Adjust value by  $\uparrow$  or  $\downarrow$  key at <interactive Adjustment> window.
9. Press Enter to Exit from above window.

## 2. 1394 & PRE-SHUFFLE (PAL only)

### 2-1. PLL POS. Adjustment

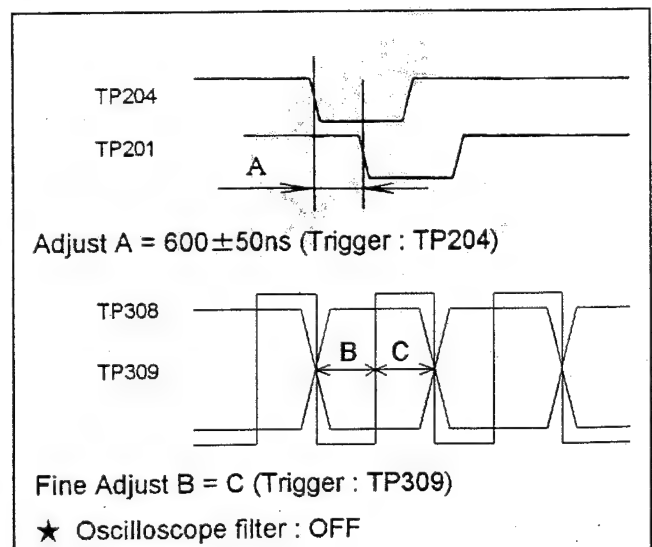
BOARD	1394 & PRE SHUFFLE
TEST	TP201, TP202
ADJUST	PC-EVR PLL_POS1_PAL
MODE	EE
INPUT	Color Bar
M.EQ	Oscilloscope
SPEC.	$B=A \pm 10\%$

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "1. PLL\_POS\_ADJUSTMENT".



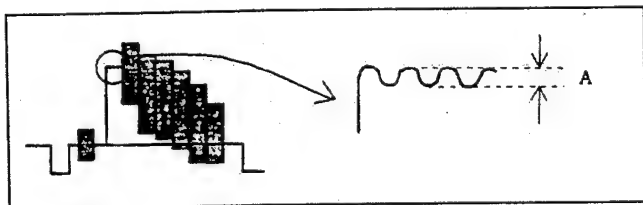
### 2-2. INH POS. Adjustment

BOARD	1394 & PRE SHUFFLE
TEST	TP201, TP204, TP308, TP309
ADJUST	VR201
MODE	EE
INPUT	Color Bar
M.EQ	Oscilloscope
SPEC.	$A=600 \pm 50ns$ , $B=C$



### 2-3. Carrier Balance Adjustment

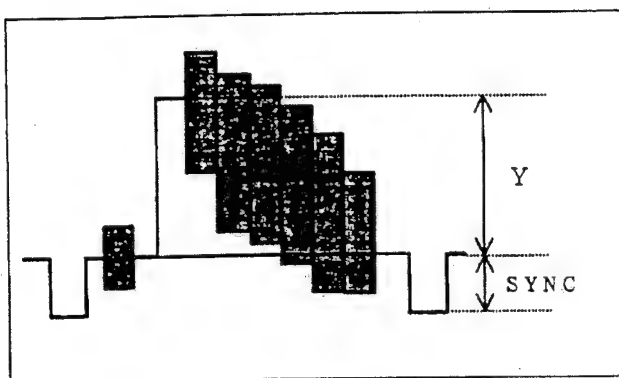
BOARD	1394 & PRE SHUFFLE
TEST	VIDEO OUT
ADJUST	VR609 (PR), VR610 (PB)
MODE	EE
INPUT	Color Bar
M.EQ	WFM
SPEC.	A=MINIMUM



### 2-4. Video & SYNC Level Adjustment

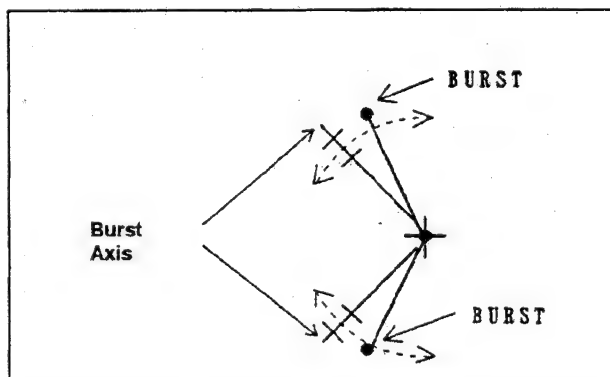
BOARD	1394 & PRE SHUFFLE
TEST	VIDEO OUT
ADJUST	PC-EVR : Y_LEVEL VR602 (SYNC)
MODE	EE
INPUT	Color Bar
M.EQ	Oscilloscope or WFM
SPEC.	$Y=700 \pm 35\text{mVp-p}$ $\text{SYNC}=300 \pm 15\text{mVp-p}$

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "2. Y\_LEVEL\_ADJUSTMENT", And SYNC Level adjust by VR602.



### 2-5. Burst 0 Phase Adjustment

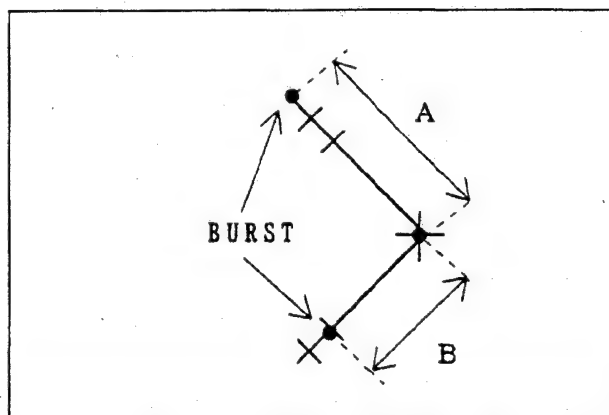
BOARD	1394 & PRE SHUFFLE
TEST	VIDEO OUT
ADJUST	VR608 (BURST 0)
MODE	EE
INPUT	Color Bar
M.EQ	Vector Scope
SPEC.	Vector Scale(see below)



Adjust the both Burst phase align to the Burst Axis of the Vector Scope.

### 2-6. QUAD Adjustment

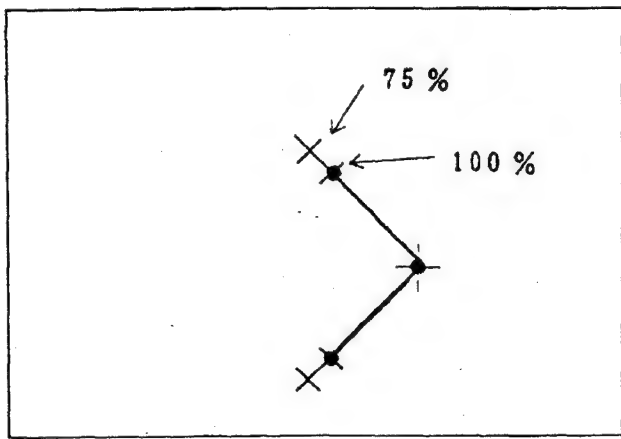
BOARD	1394 & PRE SHUFFLE
TEST	VIDEO OUT
ADJUST	VC601 (QUAD)
MODE	EE
INPUT	Color Bar
M.EQ	Vector Scope
SPEC.	A=B



Adjust the Burst level A and B are same level.

## 2-7. Burst Level Adjustment

<b>BOARD</b>	1394 & PRE SHUFFLE
<b>TEST</b>	VIDEO OUT
<b>ADJUST</b>	VR607
<b>MODE</b>	EE
<b>INPUT</b>	Color Bar
<b>M.EQ</b>	Vector Scope
<b>SPEC.</b>	Burst Level = 100% Scale



## 2-8. Chroma Level Adjustment

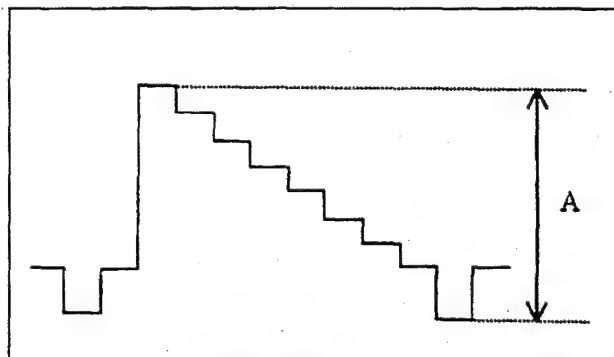
<b>BOARD</b>	1394 & PRE SHUFFLE
<b>TEST</b>	VIDEO OUT
<b>ADJUST</b>	VR604 (PB) PC-EVR : C LEVEL (PR)
<b>MODE</b>	EE
<b>INPUT</b>	Color Bar
<b>M.EQ</b>	Vector Scope
<b>SPEC.</b>	See below

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "3. CHROMA\_ADJUSTMENT(PR\_LEVEL)".

Adjust PR level by PC-EVR first and PB level by VR so that Red dot Becomes into center of square mark on the Vector Scope. And confirm other color dot on the each square marks.

## 2-9. Y Out Level Adjustment

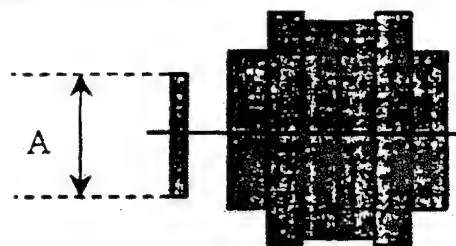
<b>BOARD</b>	1394 & PRE SHUFFLE
<b>TEST</b>	Y OUT
<b>ADJUST</b>	VR802 (Y LEVEL)
<b>MODE</b>	EE
<b>INPUT</b>	Color Bar
<b>M.EQ</b>	WFM or Oscilloscope
<b>SPEC.</b>	$A=1.00 \pm 0.05V_{p-p}$



## 2-10. C Out Level Adjustment

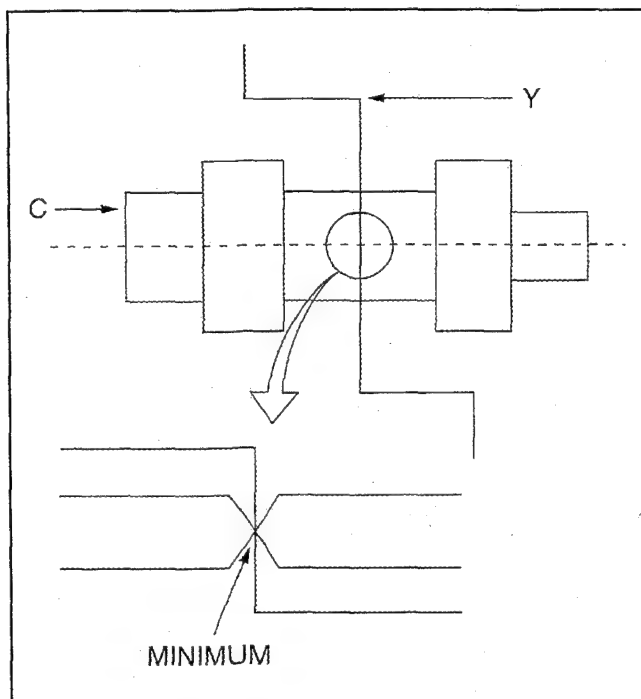
<b>BOARD</b>	1394 & PRE SHUFFLE
<b>TEST</b>	C OUT
<b>ADJUST</b>	VR803 (C LEVEL)
<b>MODE</b>	EE
<b>INPUT</b>	Color Bar
<b>M.EQ</b>	WFM or Oscilloscope
<b>SPEC.</b>	$A=300 \pm 15mV_{p-p}$

Trigger : VIDEO OUT



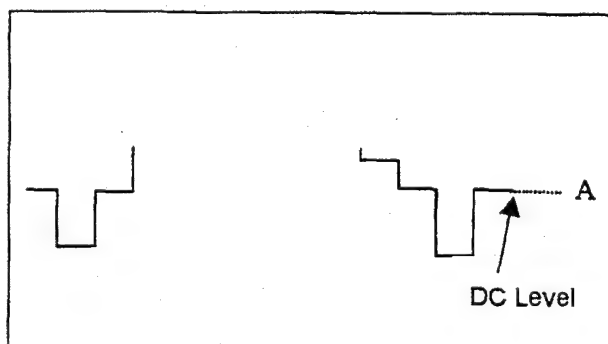
## 2-11. Y/C Timing Adjustment

BOARD	1394 & PRE SHUFFLE
TEST	TP802(Y), TP803(C)
ADJUST	VR603(PB), VR605(PR)
MODE	EE
INPUT	Color Bar
M.EQ	WFM or Oscilloscope
SPEC.	A=MINIMUM



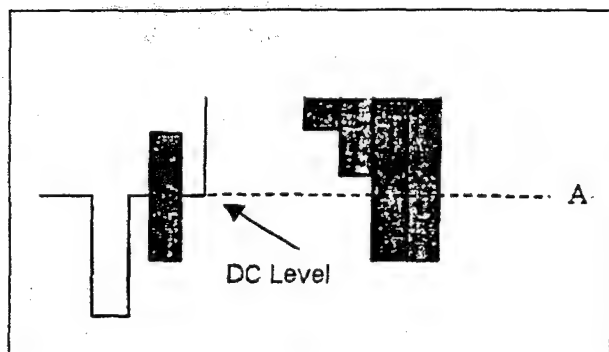
## 2-13. Y Out DC Adjustment

BOARD	1394 & PRE SHUFFLE
TEST	TP802(Y)
ADJUST	VR801(Y DC)
MODE	EE
INPUT	Color Bar
M.EQ	Oscilloscope
SPEC.	A= $0 \pm 0.05V$



## 2-12. Video Out DC Adjustment

BOARD	1394 & PRE SHUFFLE
TEST	TP804(VIDEO)
ADJUST	VR804(VIDEO DC)
MODE	EE
INPUT	Color Bar
M.EQ	Oscilloscope
SPEC.	A= $0 \pm 0.05V$



### 3. VIDEO/RF

#### 3-1. AUDIO VCO Adjustment

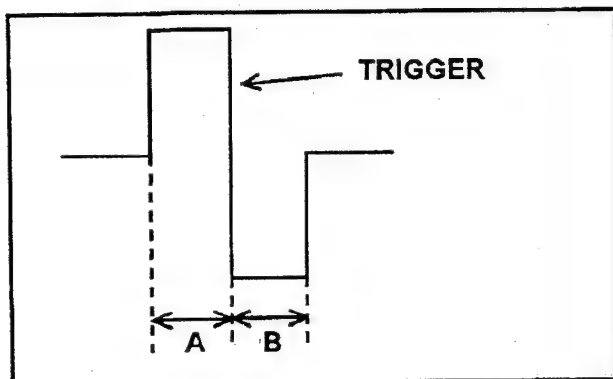
BOARD	MAIN
TEST	TP8
ADJUST	PC-EVR : AUDIO_VCO
MODE	EE
TAPE	- - -
M.EQ	Oscilloscope
SPEC.	A=B $\pm$ 5%

<NTSC>

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "1. AUDIO\_VCO".

<PAL>

Select PC-EVR "VIDEO ADJUSTMENT 2"  $\Rightarrow$  "1. AUDIO\_VCO".



#### 3-2. ZEBRA Adjustment

BOARD	MAIN
TEST	TP12
ADJUST	PC-EVR
MODE	PLAY & EE
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	4.25 $\pm$ 0.15 CRT scale

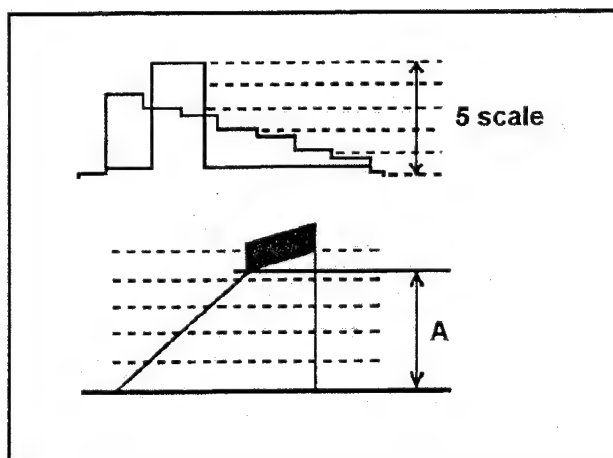
<NTSC>

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "5. ZEBRA\_ADJUSTMENT".

<PAL>

Select PC-EVR "VIDEO ADJUSTMENT 2"  $\Rightarrow$  "2. ZEBRA\_ADJUSTMENT".

1. Playback the alignment tape and set TP12(Y level) to 5 scales of the oscilloscope by CAL.
2. Select "OUTPUT=RAMP" command and press Enter, the unit will change Ramp signal mode.
3. Adjust PC-EVR (ZEBRA=) so that A level becomes 4.25 scale level of the oscilloscope.
4. After completed this adjustment, make sure select "OUTPUT=CAM" to back camera signal mode.

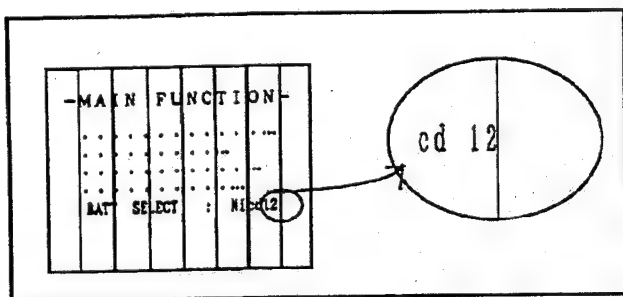




### 3-3. Character Position Adjustment

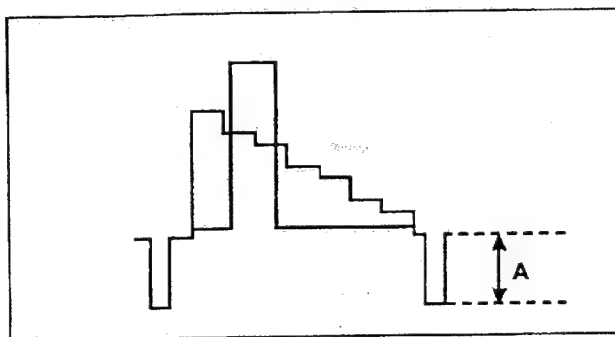
BOARD	MAIN
TEST	VIEW FINDER CRT
ADJUST	VC1
MODE	EE
TAPE	---
M.EQ	---
SPEC.	See below

1. Set the CAM/BAR switch to BAR side.
2. Adjust VC1 (VC6001) so that right edge of character comes as below position.



### 3-4. SYNC Level Adjustment (NTSC only)

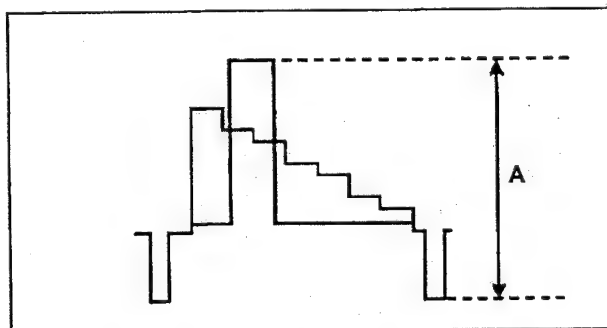
BOARD	MAIN
TEST	S-VIDEO (Y OUT)
ADJUST	VR6
MODE	PLAY
TAPE	VFM3580KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	$A=0.286 \pm 0.004V_{p-p}$ (75 ohm terminated)



### 3-5. Y Level Adjustment (NTSC only)

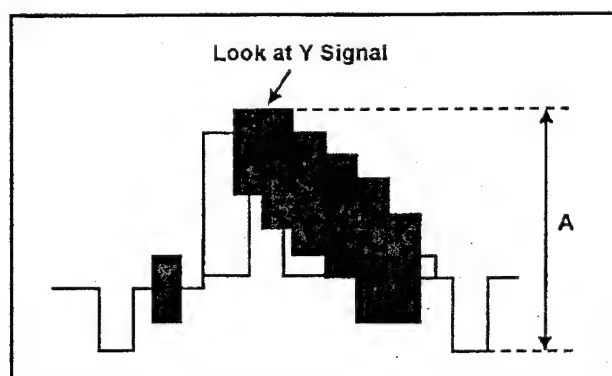
BOARD	MAIN
TEST	S-VIDEO (Y OUT)
ADJUST	PC-EVR
MODE	PLAY
TAPE	VFM3580KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	$A=1.0 \pm 0.02V_{p-p}$ (75 ohm terminated)

Select PC-EVR "VIDEO ADJUSTMENT 1"  $\Rightarrow$  "2. Y\_OUT\_LEVEL\_ADJUSTMENT".



### 3-6. VIDEO Level Adjustment (NTSC only)

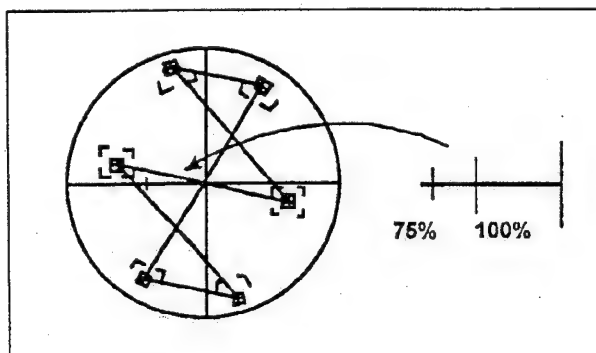
BOARD	MAIN
TEST	VIDEO OUT
ADJUST	VR10
MODE	PLAY
TAPE	VFM3580KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	$A=1.0 \pm 0.02V_{p-p}$ (75 ohm terminated)



### 3-7. BURST Level Adjustment (NTSC only)

BOARD	MAIN
TEST	VIDEO OUT
ADJUST	PC-EVR
MODE	PLAY
TAPE	VFM3580KL (Color Bar)
M.EQ	Vector Scope
SPEC.	75% scale position

Select PC-EVR "VIDEO ADJUSTMENT 1" ⇒ "3. BURST\_LEVEL\_ADJUSTMENT".

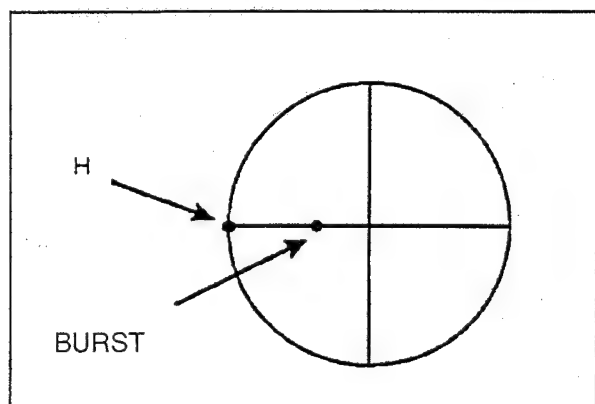


### 3-8. SCH Adjustment (NTSC only)

BOARD	MAIN
TEST	VIDEO OUT
ADJUST	PC-EVR
MODE	PLAY
TAPE	VFM3580KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	SCH=0 ± 45°

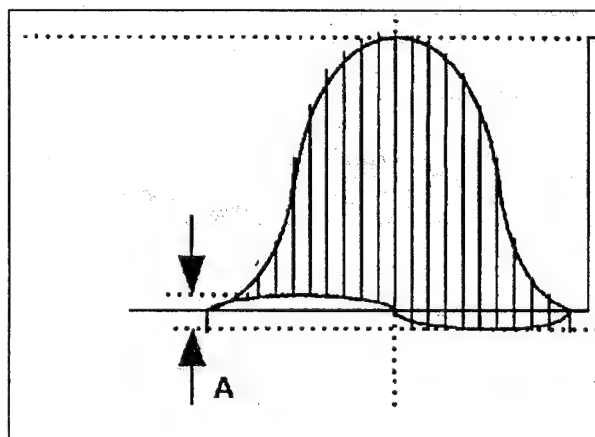
Select PC-EVR "VIDEO ADJUSTMENT 1" ⇒ "4. SCH\_PHASE\_ADJUSTMENT".

1. Adjust SCH so that as close to 0 degrees.



### 3-9. Y/C Timing Adjustment (NTSC only)

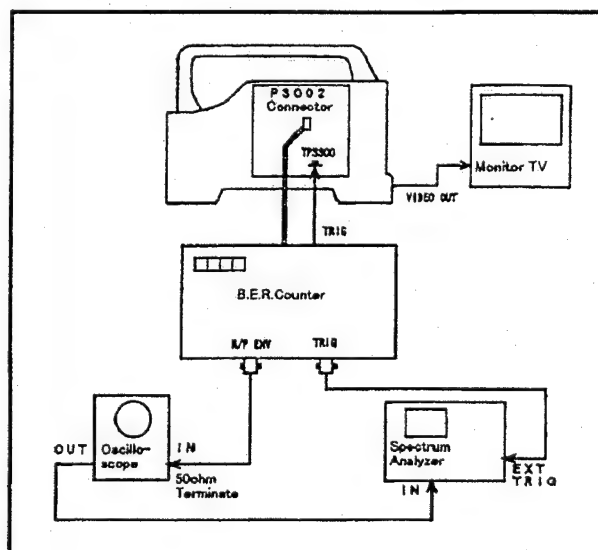
BOARD	MAIN
TEST	VIDEO OUT
ADJUST	VR5
MODE	PLAY
TAPE	VFM3580KL (Pulse & Bar)
M.EQ	WFM
SPEC.	A=minimize



### <RF Adjustment Preparation>

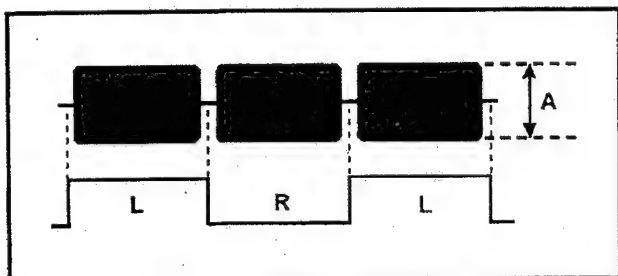
Spectrum Analyzer setting

START FREQ. : 0Hz  
 STOP FREQ. : 25Hz  
 RES BW : 300KHz  
 VIDEO BW : 1KHz  
 SWEEP TIME : 75ms  
 dB/div : 2dB  
 REF LEVEL : -42dB (Oscilloscope : 20mv)  
 TRIG : EXT (TP3300)



### 3-10. R/P Envelope Confirmation

BOARD	VTR MAIN
TEST	R/P Envelope, TP3300
ADJUST	---
MODE	PLAY
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	Oscilloscope
SPEC.	$A \geq 70\text{mVp-p}$



### 3-11. PB Equalizer Adjustment

BOARD	VTR MAIN
TEST	B.E.R. Counter
ADJUST	PC-EVR : as following commands
MODE	PLAY
TAPE	NTSC : VFM3580KL PAL : VFM3680KL
M.EQ	B.E.R. Counter
SPEC.	Error rate = MINIMUM

Select PC-EVR "VIDEO ADJUSTMENT 2"  $\Rightarrow$  "3. PLAYBACK\_E.Q.\_ADJUSTMENT".

1. Select "Setting" line and press Enter, automatically set INNERECC and OUTERECC to OFF mode.
2. Playback alignment tape and adjust PC-EVR (PLL\_SL=  $\rightarrow$  PLL\_POS=  $\rightarrow$  AUTO\_EQ=  $\rightarrow$  EQ\_a\_L=  $\rightarrow$  EQ\_b\_L= then repeat PLL\_SL=) so that L-ch error rate becomes minimum.
3. Set CH SW of B.,E.R. Counter to R side and adjust PC-EVR(EQ\_a\_R=  $\rightarrow$  EQ\_b\_R=) so that R-ch error rate becomes minimum.

### 3-12. REC Current Adjustment

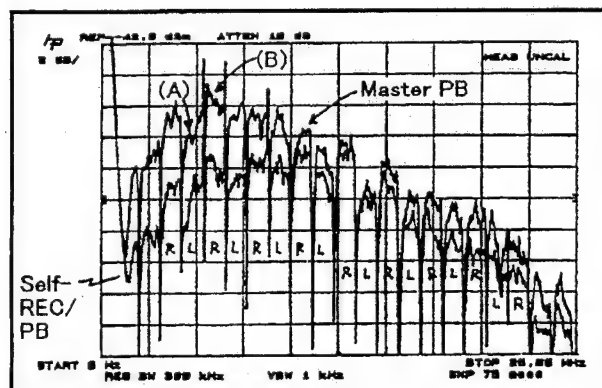
BOARD	VTR MAIN
TEST	TP3202 (L-ch), TP3203(R-ch)
ADJUST	PC-EVR : REC_cur_L, REC_cur_R
MODE	REC/PB
TAPE	Recording Tape
M.EQ	Spectrum Analyzer
SPEC.	See Below

Select PC-EVR "VIDEO ADJUSTMENT 2"  $\Rightarrow$  "10. REC\_CUR\_ADJUSTMENT".

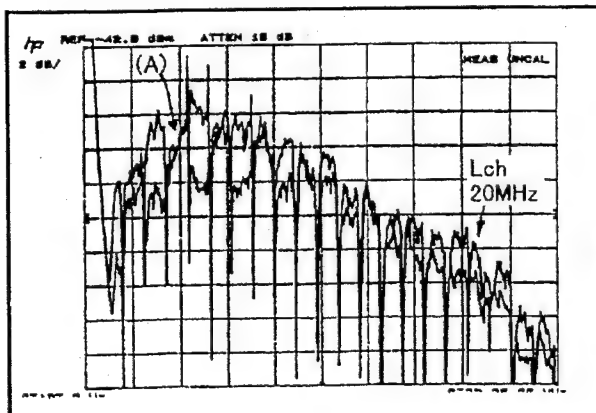
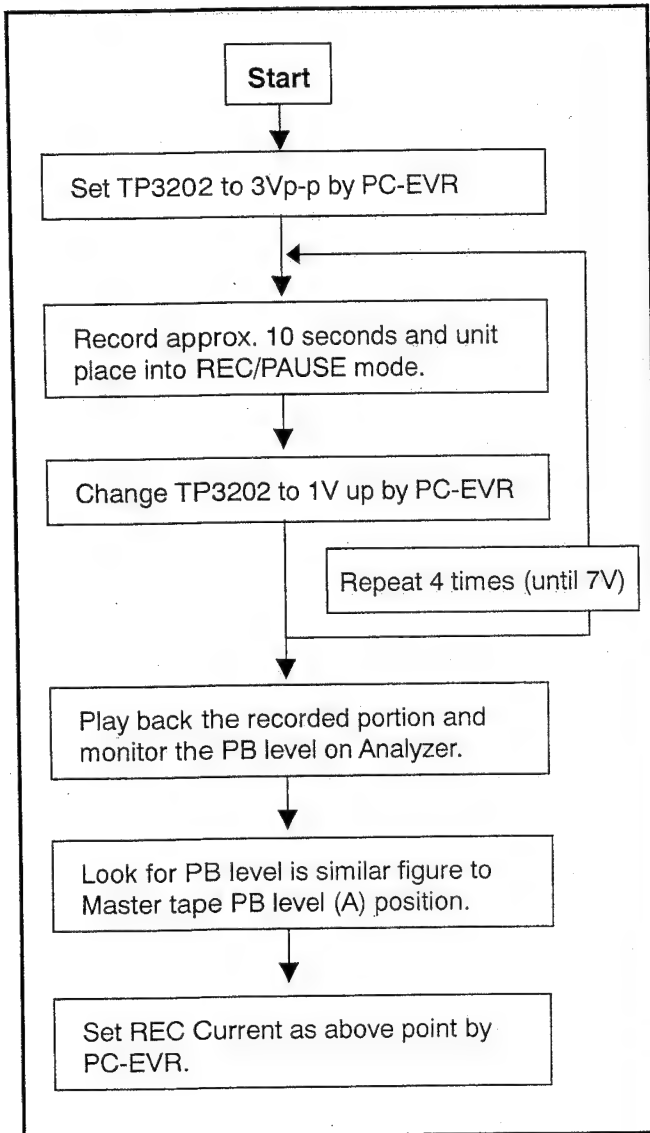
B.E.R. Counter setting  
Error Count : OFF  
HSW SW : R

#### << Preparation >>

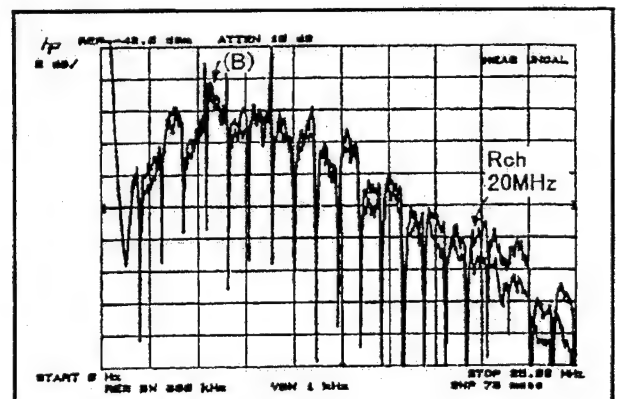
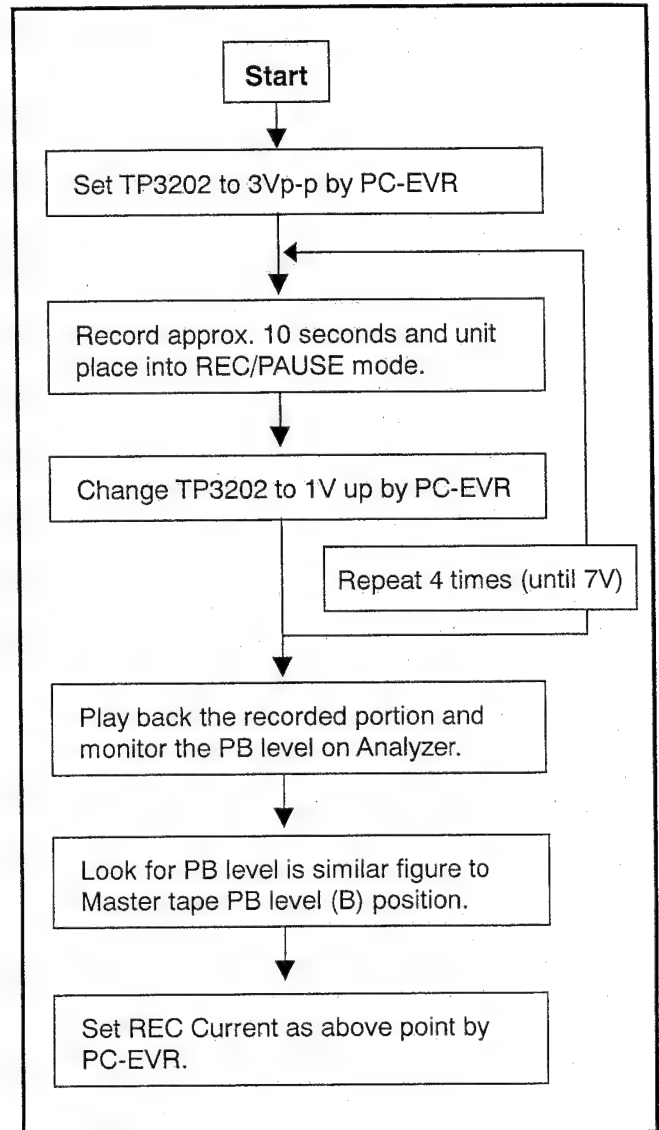
1. Playback the color bar portion of alignment tape and store average of 50 sampling in TRACE B on the Spectrum Analyzer.
2. Insert blank tape and record internal color bar signal.
3. Set REC current level for both channel to 3Vp-p by PC-EVR (L-ch : REC\_CUR\_L=, R-ch : REC\_CUR\_R=).
4. Play back just recorded portion and confirm (A) and (B) point should be lower than master play back level.



## << L-ch Adjustment >>



## << R-ch Adjustment >>



After completed RF adjustment should be set ECC mode to OFF.

Select PC-EVR "VIDEO ADJUSTMENT 2" ⇒ "12. SETTING", it is set INNERECC and OUTECC to OFF

## 4. AUDIO

### 4-1. PB LEVEL Adjustment

BOARD	VTR MAIN
TEST	AUDIO OUT
ADJUST	VR4101 (CH1), VR4201 (CH2)
MODE	PLAY
TAPE	NTSC : VFM3580KL PAL : VFM3680KL
M.EQ	V.T.V.M
SPEC.	-6dBu $\pm$ 0.2dBu

1. Adjust VR4101 for CH1 and VR4201 for CH2 so that play back level becomes within specification.

### 4-2. CUE REC LEVEL Adjustment

BOARD	VTR MAIN
TEST	TP4001
ADJUST	VR4003
MODE	STOP
TAPE	---
M.EQ	V.T.V.M
SPEC.	-10dBu $\pm$ 0.2dBu

<<Preparation>>

- Select MIC SELECT SW on the side panel to "REAR" position for both channel.
  - Set REAR MIC LEVEL in menu screen to "-40dB" position.
  - Set CUE REC SELECT in menu screen to "CH1" position.
  - Adjust audio signal generator level becomes -6dBu at audio output.
  - Connect PC-EVR and set Dolby OFF mode as following steps.
    1. Use F6 Direct Command function
    2. Type "DOLBY=OFF" then press Enter.
1. Adjust VR4003 so that audio out put level becomes within specification.

After completed this adjustment should be perform next item "4-3. CUE REC CURRENT ADJ.". Then make sure Dolby set to ON mode by PC-EVR.

### 4-3. CUE REC Current Adjustment

BOARD	REAR JACK
TEST	TP1001
ADJUST	VR1002
MODE	PLAY
TAPE	NTSC : VFM3580KL PAL : VFM3680KL
M.EQ	V.T.V.M
SPEC.	0 $\pm$ 3dBu

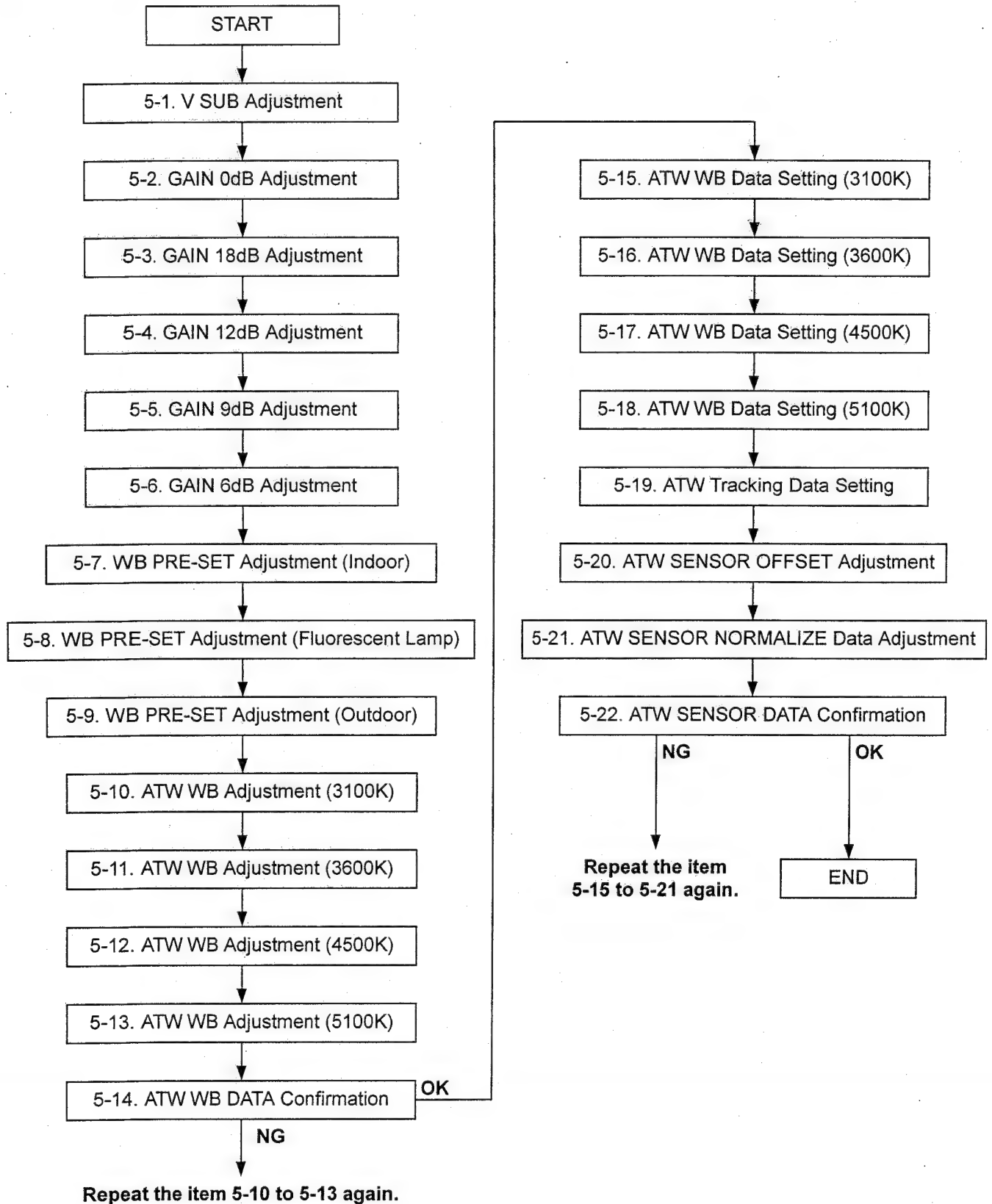
Pleas set as same as "4-2. CUE REC Level Adj." condition.

1. Play back the alignment tape and measure level at TP1002(take memo).
2. Make self record and play back, and adjust VR1002 so that play back level becomes within specification for previous step 1 level.

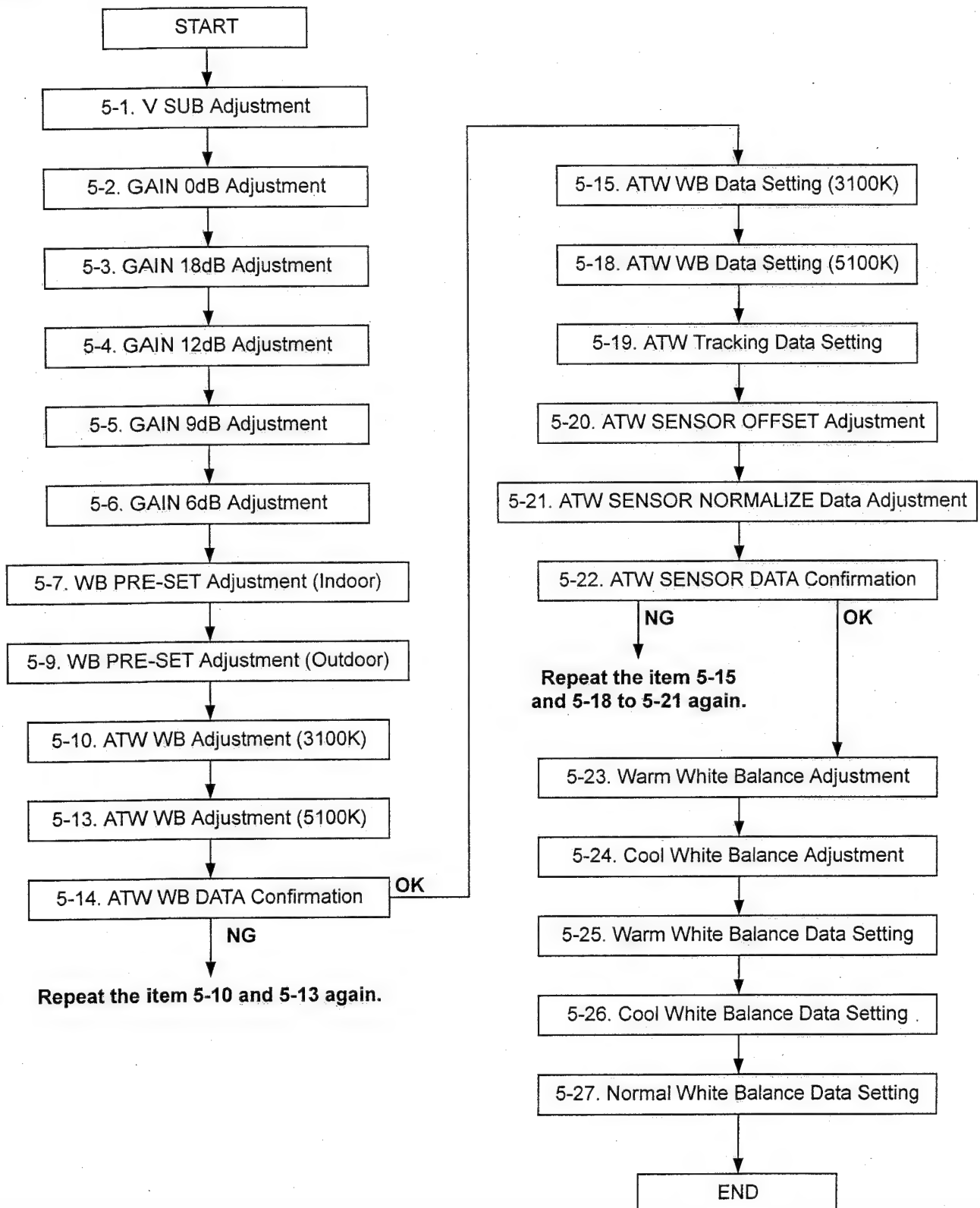
After completed this adjustment make sure Dolby set to ON mode by PC-EVR.

## 5. CAMERA

### Adjustment Flowchart (NTSC)



## Adjustment Flowchart (PAL)



All camera adjustment items using the PC-EVR.

Lighting set up : 3200K, 2000Lux

### 5-1. V SUB Adjustment

Select "1. VSUB\_CUR\_ADJUSTMENT".

<b>SETTING</b>	IRIS : AUTO GAIN : 0dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[All Steps]** and press Enter key, then automatically set the fixed data into **EEPROM**.

✓ Make sure selected top line on adjustment item on screen.

\* After completed this adjustment, press **F1(File)** and select **HD Read**.

### 5-2. GAIN 0dB Adjustment

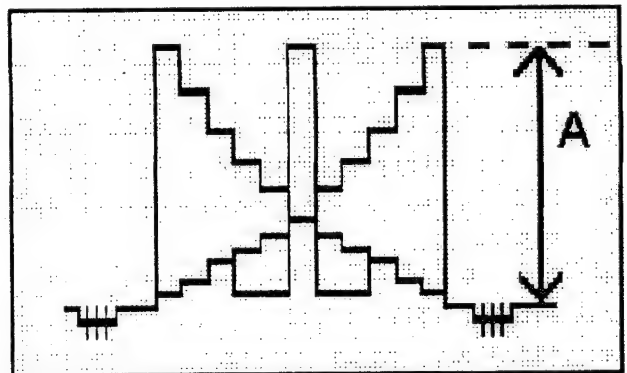
Select "2. CAMERA\_GAIN\_ADJUSTMENT" for all Gain adjustments (Item No. 5-2 to 5-6).

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	P6603 Pin 4 : AGC out (R) P6603 Pin 1 : GND
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Oscilloscope, Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected top line of adjustment menu.  
[1. CAMERA\_GAIN(0dB)]

1. Perform Line No.1 "ADmin\_R=160" to Line No.7 "AGCmin\_R=0".
2. Adjust IRIS on the Lens so that Level (A) of P6603 pin 4 (AGC R) becomes 250mV.
3. Select "AGCmin\_G=" and adjust the dot is at center of the vector scope by  $\uparrow\downarrow$  key.
4. Select "AGCmin\_B=" and adjust the dot is at center of the vector scope by  $\uparrow\downarrow$  key.
5. Repeat above 3 and 4, then press ESC key to next step.





### 5-3. GAIN 18dB Adjustment

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[10. CAMERA\_GAIN(18dB)]

1. Select "AGCmax\_18G=" and adjust the dot is at center of the vector scope by ↑↓ key.
2. Select "AGCmax\_18B=" and adjust the dot is at center of the vector scope by ↑↓ key.
3. Repeat above 1 and 2, then press ESC key to next step.

### 5-4. GAIN 12dB Adjustment

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[14. CAMERA\_GAIN(12dB)]

1. Select "AGCmax\_12G=" and adjust the dot is at center of the vector scope by ↑↓ key.
2. Select "AGCmax\_12B=" and adjust the dot is at center of the vector scope by ↑↓ key.
3. Repeat above 1 and 2, then press ESC key to next step.

### 5-5. GAIN 9dB Adjustment

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[17. CAMERA\_GAIN(9dB)]

1. Select "AGCmax\_9G=" and adjust the dot is at center of the vector scope by ↑↓ key.
2. Select "AGCmax\_9B=" and adjust the dot is at center of the vector scope by ↑↓ key.
3. Repeat above 1 and 2, then press ESC key to next step.

### 5-6. GAIN 6dB Adjustment

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[20. CAMERA\_GAIN(6dB)]

1. Select "AGCmax\_6G=" and adjust the dot is at center of the vector scope by ↑↓ key.
2. Select "AGCmax\_6B=" and adjust the dot is at center of the vector scope by ↑↓ key.
3. Repeat above 1 and 2, and perform Line No.23 "SYNC" then press ESC key and select STOP to EXIT.

## 5-7. WB PRE-SET Adjustment (Indoor)

Select "3. WB\_PRE-SET\_ADJUSTMENT" for all Gain adjustments (item No. 5-7 to 5-9).

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.  
[1. WB\_PRE-SET\_ADJUSTMENT(INDOOR)]

1. Perform Line No.1 to 3 "AWB\_R=0X50, AWB\_B=0X70" and confirm the dot is at center of the vector scope.
2. Select "AWB=indoorset" and adjustment performed automatically.

## 5-8. WB PRE-SET Adjustment (NTSC only) (Fluorescent Lamp)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	- - -
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.  
[5. WB\_PRE-SET\_ADJUSTMENT(3600K) ]

1. Put the CC filter (VFK1341:LB40) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=fluoreset" and adjustment performed automatically.

Note: When executing the "AWB=Setting" command, first, confirm that the white balance has been completed. only then, advance to the next line (command).

## 5-9. WB PRE-SET Adjustment (Outdoor)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen + LB120 Filter
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

<NTSC>

[7. WB\_PRE-SET\_ADJUSTMENT(5100K)]

<PAL>

[5. WB\_PRE-SET\_ADJUSTMENT(OUTDOOR)]

1. Put the CC filter (VFK1347:LB120) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=outdoorset" and adjustment performed automatically.

\* Installation of CC filter

- (1) Remove the lens foot. Then, attach the CC filter holder ring (VFK 1346) to the front side of the lens, and install the CC filter holder (VFK1345).
- (2) Remove the CC filter support of the holder, and install the specified filter. Then, start the adjustment.

### 5-10. ATW WB Adjustment (3100K)

Select "3. ATW:WB\_ADJUSTMENT" for all Gain adjustments (item No. 5-10 to 5-13).

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[1. ATW:WB\_ADJUSTMENT(3100K)]

1. Make sure no filter on the Lens.
2. Select "AWB\_R=0X50", AWB\_B=0X70 line and confirm the dot is at center of the vector scope.
3. Select "AWB=3100set" and adjustment performed automatically.

### 5-11. ATW WB Adjustment (3600K) (NTSC only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	---
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[4. ATW:WB\_ADJUSTMENT(3600K)]

1. Put the CC filter(VFK1341: LB40) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=3600set" and adjustment performed automatically.

\* Installation of CC filter

- (1) Remove the lens foot. Then, attach the CC filter holder ring (VFK 1346) to the front side of the lens, and install the CC filter holder (VFK1345).
- (2) Remove the CC filter support of the holder, and install the specified filter. Then, start the adjustment.

### 5-12. ATW WB Adjustment (4500K) (NTSC only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	---
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[6. ATW:WB\_ADJUSTMENT(4500K)]

1. Put the CC filter(VFK1342 : LB80) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=4500set" and adjustment performed automatically.

Note: When executing the "AWB=Setting" command, first, confirm that the white balance has been completed. only then, advance to the next line (command).

### 5-13. ATW WB Adjustment (5100K)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen + LB120 Filter
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

<NTSC>

[8. ATW:WB\_ADJUSTMENT (5100K)]

<PAL>

[4. ATW:WB\_ADJUSTMENT (5100K)]

1. Put the CC filter(VFK1347: LB120) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=5100set" and adjustment performed automatically.

### 5-14. ATW WHITE BALANCE DATA Confirmation

Select "5. ATW:WB\_DATA\_ADJUSTMENT" for all Gain adjustments (item No. 5-14 to 5-18).

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	Not Required
<b>CHART</b>	---
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[1. ATW\_WB\_DATA\_CHECK]

Select "ATWADJ=Gaincheck" and perform it, then confirm "OK" display appear on the Screen. If appear "NG", re-adjust item 5-10 to 5-13 again.

### 5-15. ATW WB Data Setting (3100K)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[2. ATW\_WB\_DATA\_SETTING (3100K)]

1. Make sure no filter on front of the Lens.
2. Select "ATWADJ=3100ATW" and adjustment performed automatically.

### 5-16. ATW WB Data Setting (3600K) (NTSC only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	---
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[3. ATW\_WB\_DATA\_SETTING (3600K)]

1. Put the CC filter (VFK1341:LB40) on front of the Lens.
2. Select "ATWADJ=3600ATW" and adjustment performed automatically.

### 5-17. ATW WB Data Setting (4500K) (NTSC only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	---
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[4. ATW\_WB\_DATA\_SETTING (4500K)]

1. Put the CC filter (VFK1342:LB80) on front of the Lens.
2. Select "ATWADJ=4500ATW" and adjustment performed automatically.

### 5-18. ATW WB Data Setting (5100K)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen + LB120 Filter
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

<NTSC>

[5. ATW\_WB\_DATA\_SETTING (5100K)]

<PAL>

[3. ATW\_WB\_DATA\_SETTING (5100K)]

1. Put the CC filter (VFK1347:LB80) on front of the Lens.
2. Select "ATWADJ=5100ATW" and adjustment performed automatically.

### 5-19. ATW Tracking Data Setting

Select "6. ATW:SENSOR\_ADJUSTMENT" for adjustments item No. 5-19 to 5-27

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	Not Required
<b>CHART</b>	---
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[1. ATW\_TRACKING\_SETTING]

1. Select "ATWADJ=Tracking" and adjustment performed automatically.

*After this adjustment, the Power OFF/ON of the unit.*

### 5-20. ATW SENSOR OFFSET Adjustment

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

✓ Make sure selected line of adjustment menu.

[2. ATW:SENSOR\_OFFSET\_SETTING]

1. Make sure no filter on front of the Lens.
2. Select "ATWADJ=Sensor\_OFFSET" and adjustment performed automatically.

Confirm that the "OK" message is displayed on the PC screen. If the "NG" message is displayed, perform the adjustment process from 5-15 to 5-19 again.

## 5-21. ATW SENSOR NORMALIZE Data Adjustment

SETTING	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
LIGHT	3200K Halogen + LB120 Filter
CHART	Gray Scale
M.EQ	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[3. ATW:SENSOR\_DATA\_NORMALIZE]

1. Put the CC filter (VFK1347: LB120) on front of the ATW Sensor.
2. Select "ATWADJ=Sensor\_Normalize" and adjustment performed automatically.

*After this adjustment, the Power OFF/ON of the unit.*

Confirm that the "OK" message is displayed on the PC screen. If the "NG" message is displayed, perform the adjustment process from 4-15 to 4-21 again.

## 5-22. ATW SENSOR DATA Confirmation

SETTING	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
LIGHT	3200K Halogen + LB120 Filter
CHART	Gray Scale
M.EQ	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[4. ATW:SENSOR\_CHECK]

1. Put the CC filter (VFK1347: LB120) on front of the ATW Sensor.
2. Select "ATWADJ=Sensor Check" and perform it, then confirm "OK" display appear on the Screen. If appear "NG", re-adjust item 5-15 to 5-21 again.

Confirm that the "OK" message is displayed on the PC screen. If the "NG" message is displayed, perform the adjustment process from 4-15 to 4-21 again.

## 5-23. Warm White Balance Adjustment (PAL only)

SETTING	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
LIGHT	3200K Halogen + LA40 Filter
CHART	Gray Scale
M.EQ	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[5. TW:WARM\_WHITE\_BALANCE\_SETTING]

1. Put the CC filter (VFK : LA40) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=WWset" and adjustment performed automatically.

## 5-24. Cool White Balance Adjustment (PAL only)

SETTING	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
LIGHT	3200K Halogen + LB40 Filter
CHART	Gray Scale
M.EQ	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[7. ATW:COOL\_WHITE\_BALANCE\_SETTING]

1. Put the CC filter (VFK1341: LB40) on front of the Lens.
2. Select "AWB=setting" and automatically adjust white balance and confirm the dot is at center of the vector scope.
3. Select "AWB=CWset" and adjustment performed automatically.

### 5-25. Warm White Balance Data Setting (PAL only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen + LA40 Filter
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[9. ATW:WARM\_WHITE\_BALANCE\_DATA]

1. Put the CC filter (VFK: LA40) on front of the Lens.
2. Select "AWBADJ=WWATW" and adjustment performed automatically.

### 5-26. Cool White Balance Data Setting (PAL only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	3200K Halogen + LB40 Filter
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[10. ATW:COOL\_WHITE\_BALANCE\_DATA]

1. Put the CC filter (VFK1341: LB40) on front of the Lens.
2. Select "AWBADJ=CWATW" and adjustment performed automatically.

### 5-27. Normal White Balance Data Setting (PAL only)

<b>SETTING</b>	IRIS : MANUAL GAIN : 0 dB AWB : MEM OUTPUT : CAM SHUTTER : OFF
<b>LIGHT</b>	Not Required
<b>CHART</b>	---
<b>M.EQ</b>	---

Press **F5(Mode)** key and set mode to **[1 Step]** and press Enter key.

- ✓ Make sure selected line of adjustment menu.  
[11. ATW:NORMAL\_WHITE\_BALANCE\_DATA]

1. Select "AWB=NWset" and adjustment performed automatically.

## CCD Replacement Procedures

Perform the following steps for the CCD replacement and adjustment.

1. Remove the both side panels.
2. Disconnect P6601, P6602 and P6605, unscrew 3 screws (A) on the TEST Connection C.B.A. (Fig. CCD1)
3. Disconnect P7 on the component side of the VTR MAIN C.B.A. and open this board then disconnect P1 on back side of this C.B.A.
4. Unscrews (B) on Front panel and carefully pull the Front panel unit with camera block out to front direction. (Fig. CCD2)
5. Unscrews 3 screws (C) on the shield case of CCD unit and remove the shield case. (Fig. CCD3)
6. Disconnect PP101 on the Sensor C.B.A. (Fig. CCD4)
7. Unscrew 3 screws (E) on CCD mount base and carefully remove CCD Prism unit from front panel (Fig. CCD5)
8. Replace the new CCD Prism unit and follows reverse way to above stops.

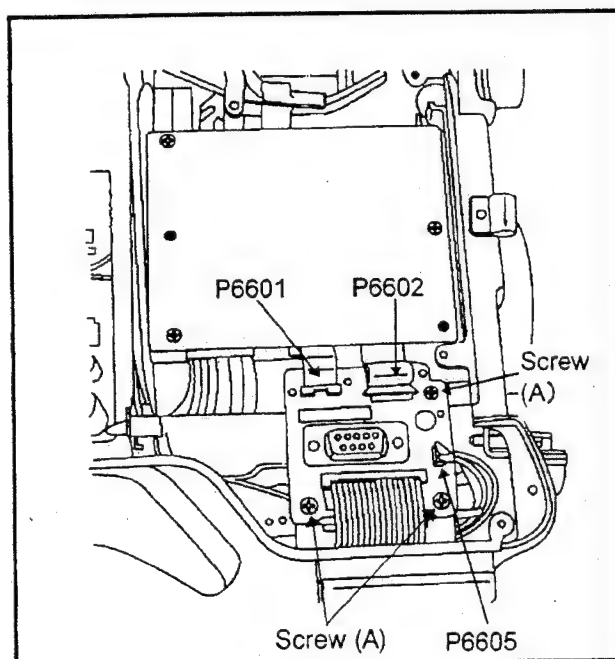


Fig. CCD1

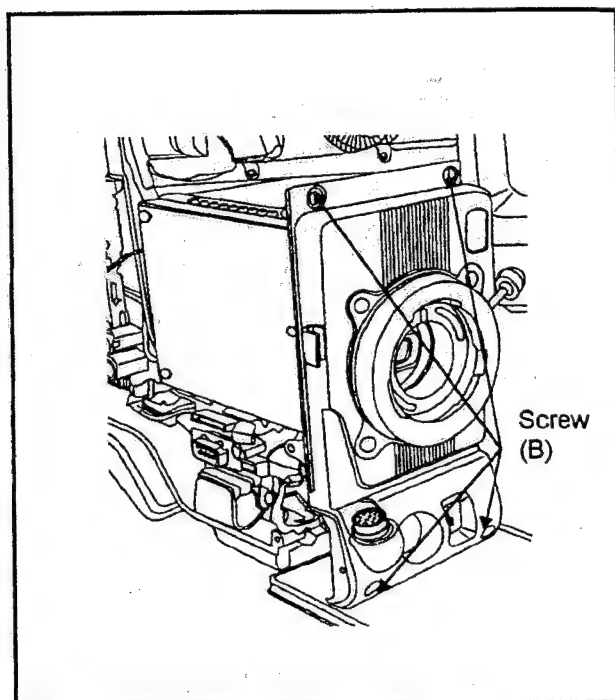


Fig. CCD2

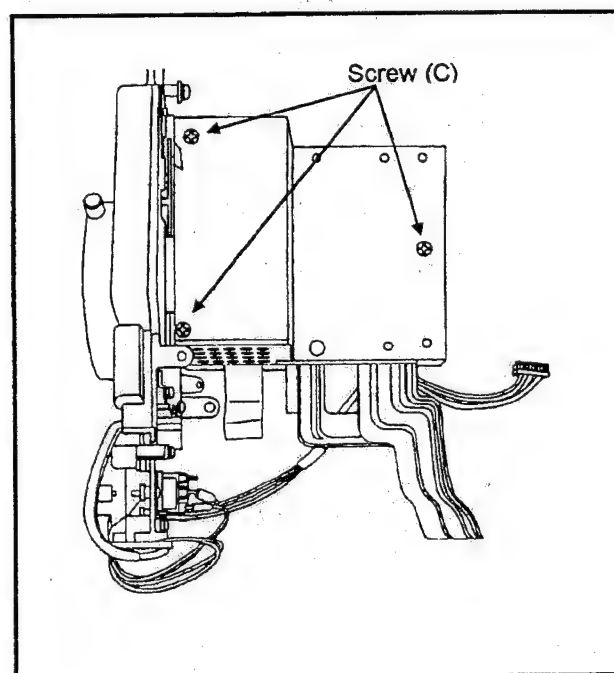


Fig. CCD3



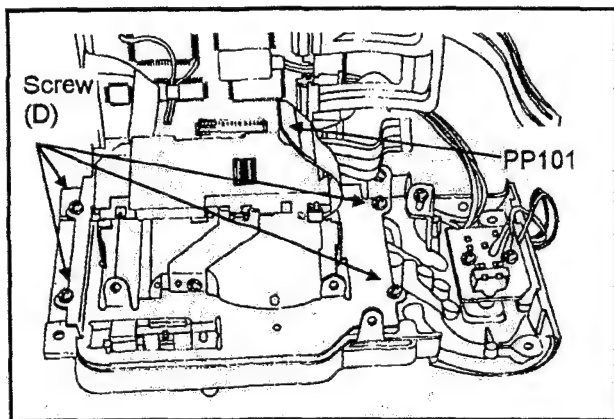


Fig. CCD4

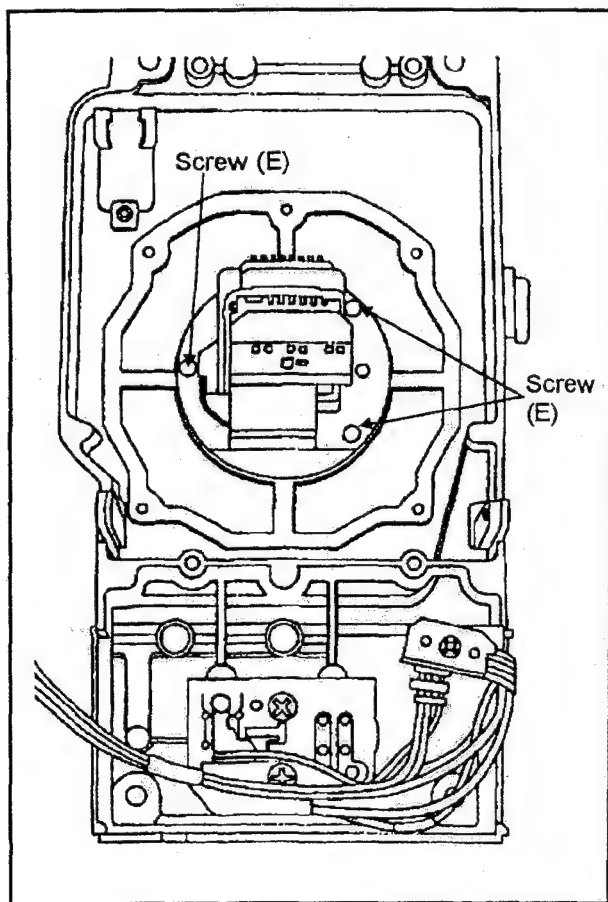
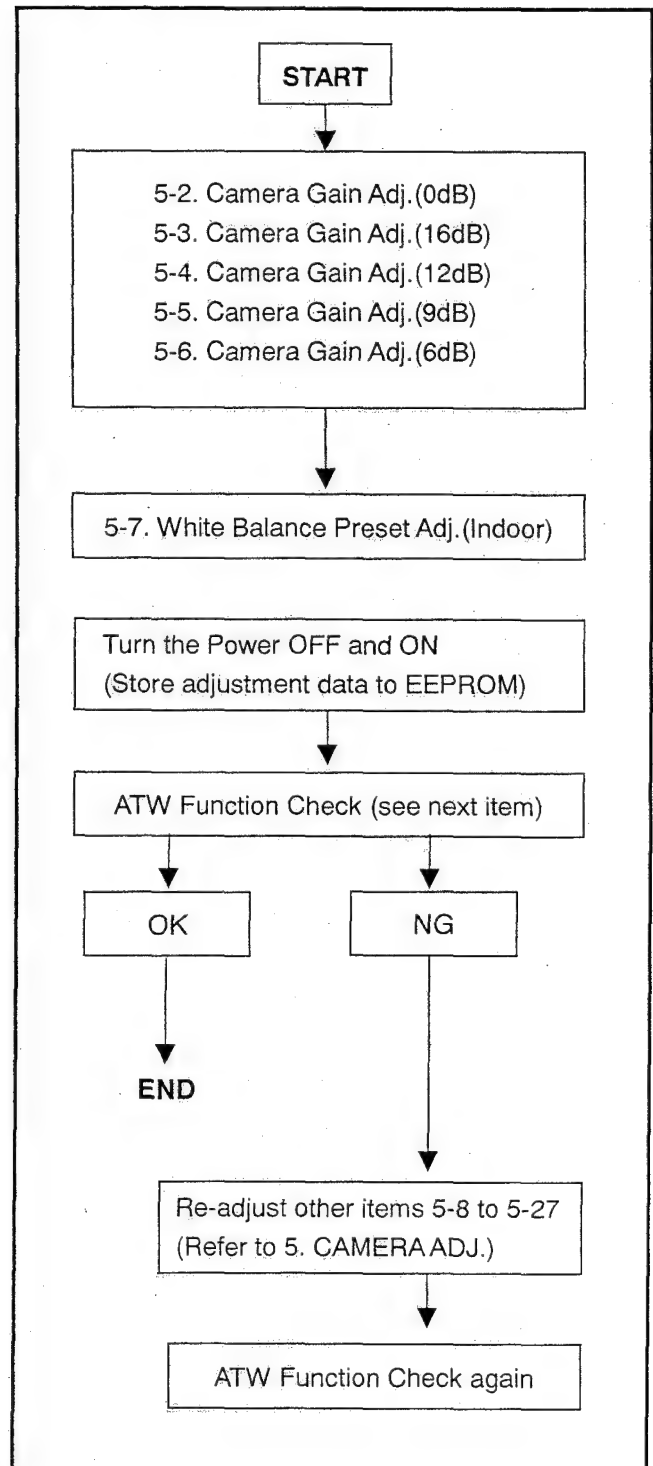


Fig. CCD5

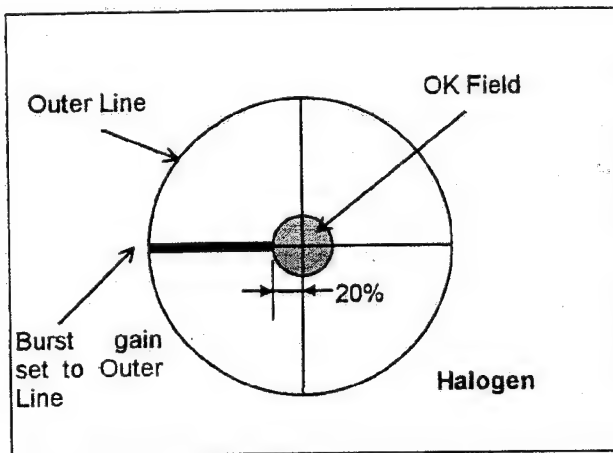
# <<Adjustment Flow Chart after Install new CCD unit>>



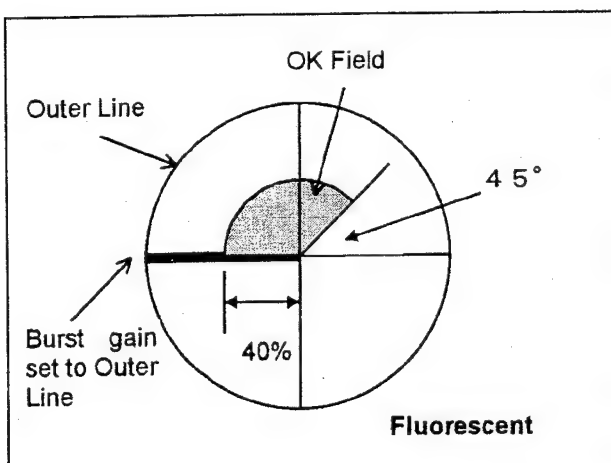
# <<ATW Function Check>>

<b>SETTING</b>	IRIS : AUTO GAIN : 0 dB AWB : ATW OUTPUT : CAM SHUTTER : OFF
<b>TEST</b>	VIDEO out
<b>CHART</b>	Gray Scale
<b>M.EQ</b>	Vector Scope

1. The AWB switch on the side panel set to "ATW" mode.
1. Confirm the dot is at OK field of the vector scope as shown in below Figure under the Halogen Lamp condition.



2. Turn OFF the Halogen Lamp and lighting condition is Fluorescent Lamp.
3. Confirm the dot is at OK field of the vector scope as shown in below Figure.



## 6. ELECTRICAL VIEWFINDER

### 6-1. Preparation

1. Remove the top case of the EVF.
2. Connect the EVF to the main unit.
3. Supply an external DC to the external Do input of the main unit.

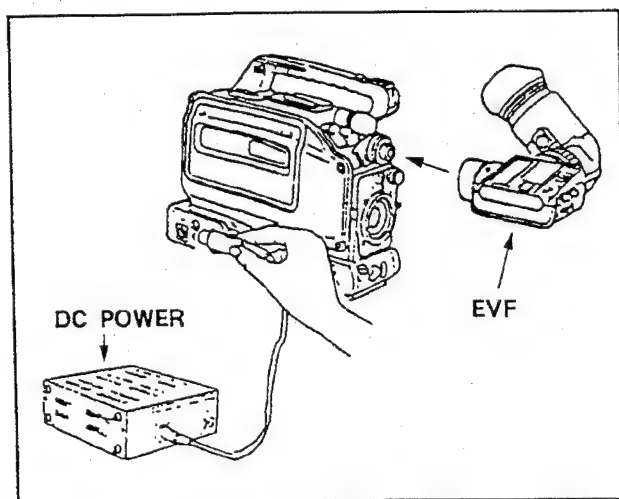


Figure F1.

### 6-2. Setting of the Controls for Adjustment

Unless otherwise specified, set the controls as shown below.

- PEAKING VR : 12 O'clock position
- CONTRAST VR : 12 O'clock position
- BRIGHT VR : 12 O'clock position
- CHARACTER SW : OFF
- ZEBRA SW : OFF
- TALLY SW : OFF
- IRIS SW : M (Manual)
- OUTPUT (CAM/BAR) SW : CAM

### 6-3. Power Supply Voltage Adjustment

BOARD	V DEF
TP	TP7001
ADJ.	VR7001
TAPE	WITHOUT TAPE
INPUT	NO INPUT SIGNAL
MODE	STOP
M.EQ	D.V.M.
SPEC.	8.6V $\pm$ 0.005V DC

1. Adjust the EVF controls as follows.
  - BRIGHT VR : Minimum (fully CCW) position
  - CONTRAST VR : Minimum (fully CCW) position
2. Connect the D.V.M. to TP7001 and adjust VR7001 so that the voltage is 8.6V  $\pm$  0.005V.

### 6-4. H Free Run Frequency Adjustment

BOARD	V DEF
TP	TP7401
ADJ.	VR7002
TAPE	WITHOUT TAPE
INPUT	NO INPUT SIGNAL
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC.	15.75KHz $\pm$ 0.1KHz (NTSC) 15.625KHz $\pm$ 0.1KHz (PAL)

1. Connect the frequency counter to TP7401 and adjust VR7002 so that the frequency is within the specification.

### 6-5. V Free Run Frequency Adjustment

BOARD	V DEF
TP	TP7002
ADJ.	VR7006
TAPE	WITHOUT TAPE
INPUT	NO INPUT SIGNAL
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC.	50Hz $\pm$ 1Hz(NTSC), 42Hz $\pm$ 1Hz(PAL)

1. Connect the frequency counter to TP7002 and adjust VR7006 so that the frequency is within the specification.

### 6-6. Deflection Yoke Tilt Adjustment

BOARD	---
TP	CRT
ADJ.	DEFLECTION YOKE
TAPE	MONOSCOPE OF ALIGNMENT TAPE
INPUT	FROM VTR SECTION
MODE	PLAY
M.EQ	---
SPEC.	PICTURE IS STRAIGHT ON THE SCREEN

1. Disassemble the CRT unit.
  - 1) Remove the top case.
  - 2) Open the H DEF C.B.A.
  - 3) Remove the eye piece unit.
  - 4) Disconnect the connectors P7004 on the Front C.B.A., P7014 on the V DEF C.B.A., P7009 on the CN C.B.A. and P7013, P7011 on the H DEF C.B.A. so that the CRT unit can be lifted.
  - 5) Shift the outer lock ring, lock ring spacer and inner lock ring to the cable side as shown in Figure F2.

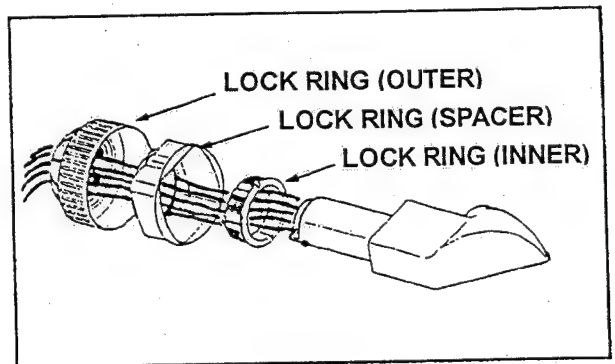


Figure F2

- 6) Unscrew the screws (A) and (B) as shown in Figure F3.

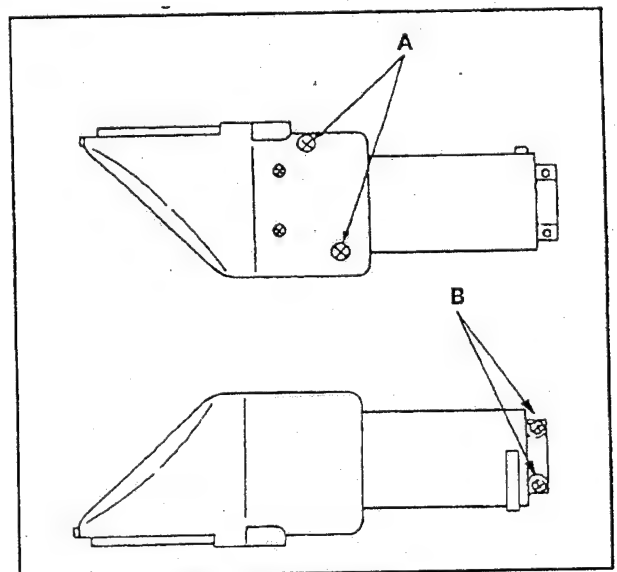


Figure F3.

- 7) Push the portion A as shown in Figure F4 so that the CRT case can be removed.

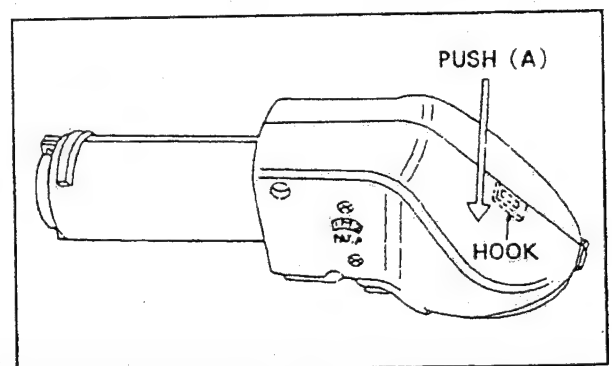


Figure F4

- 8) Connect the all connectors which have been disconnected in step 4.

2. Loosen the clamp band screw holding the deflection yoke as shown in Figure F5.
3. Rotate the deflection coil clockwise or counterclockwise so that the picture is straight on the screen as shown in Figure F6.

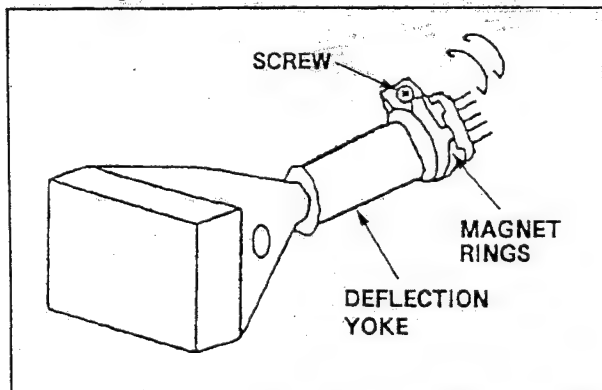


Figure F5.

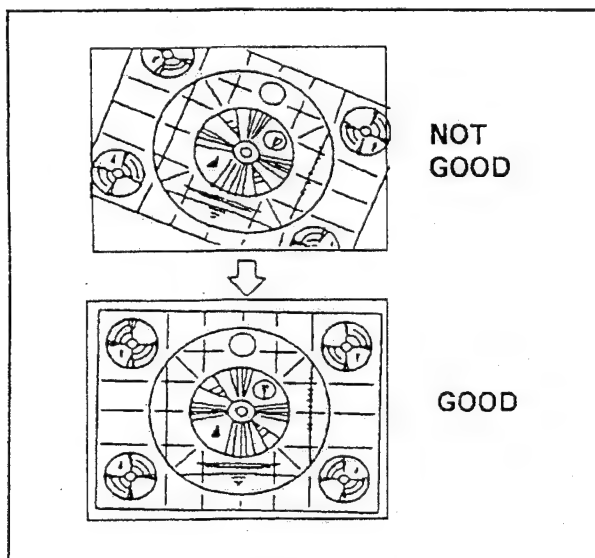


Figure F6.

#### 6-7. Picture Centering Adjustment

BOARD	---
TP	CRT
ADJ.	CENTERING MAGNETS
TAPE	MONOSCOPE OF ALIGNMENT TAPE
INPUT	FROM VTR SECTION
MODE	PLAY
M.EQ	---
SPEC.	PICTURE IS IN THE CENTER ON THE SCREEN

1. Disassemble the CRT unit.  
(refer to step 1 of 6-6. Deflection Yoke Tilt Adj.)

2. Rotate the two centering magnets as shown in Figure F4 to center the picture both vertically horizontally as shown in Figure F8.

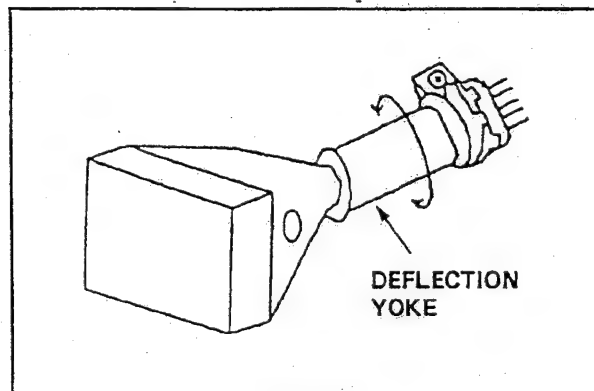


Figure F7.

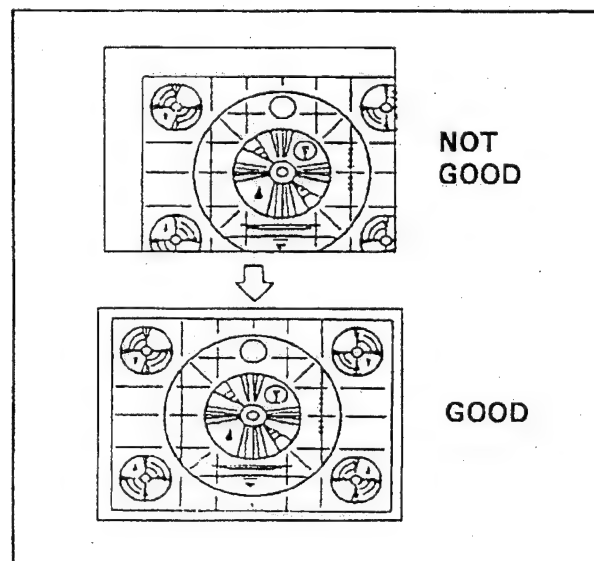


Figure F8.

#### 6-8. Picture Size Adjustment

BOARD	V DEF
TP	SCREEN
ADJ.	VR7004(V), VR7005(H)
TAPE	WITHOUT TAPE
INPUT	FROM INTERNAL COLOR BAR
MODE	STOP
M.EQ	---
SPEC.	H=0.5mm, V=0.5mm

1. Set the CAM/BAR switch at the BAR position.
2. Adjust VR7004(vertical) and VR7005 (horizontal) so that the V width and H width of the picture frame are 0.5mm as shown in Figure F9.

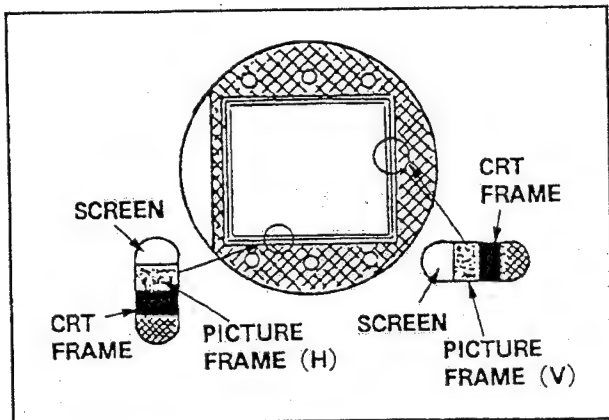


Figure F9.

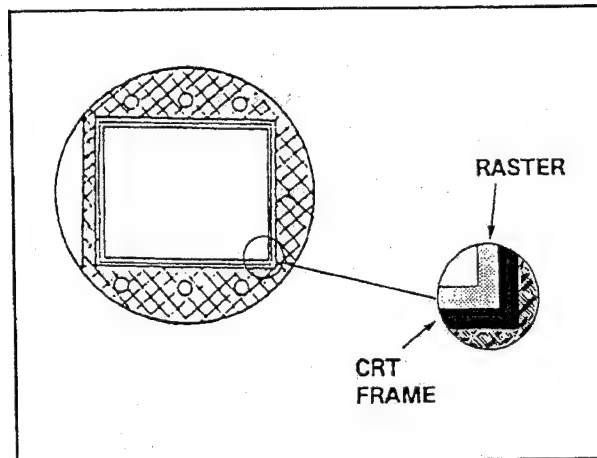


Figure F11.

### 6-9. Sub Bright Adjustment

BOARD	H DEF
TP	---
ADJ.	VR7003
TAPE	WITHOUT TAPE
INPUT	FROM CAMERA SECTION
MODE	VTR MODE STOP
M.EQ	OSCILLOSCOPE
SPEC.	RASTER JUST APPEAR

1. Connect the scope to the CAMERA OUT.
2. Place the unit in the CAM (camera) mode and manual iris mode.
3. Aim the camera to a plain white paper and adjust the iris so that the white level is 630mVp-p as shown in Figure F10.
4. Adjust the viewfinder controls as follow.
  - BRIGHT VR : 3 O'clock position
  - CONTRAST VR : Maximum (fully clockwise) position
  - PEAK VR : Minimum (fully counter-clockwise) position
5. Remove the eyepiece from the viewfinder unit.
6. Carefully observe the frame portion of the screen and adjust VR7403 so that the raster is just appeared slightly as shown in Figure F11.

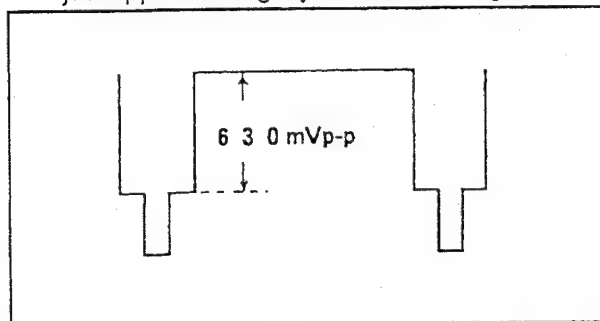


Figure F10.

### 6-10. Focus Adjustment

Before this adjustment, make sure that the Sub-Bright adjustment is performed.

BOARD	H DEF
TP	---
ADJ.	VR7402
TAPE	WITHOUT TAPE
INPUT	FROM CAMERA SECTION
MODE	VTR MODE STOP
M.EQ	---
SPEC.	BEST FOCUS

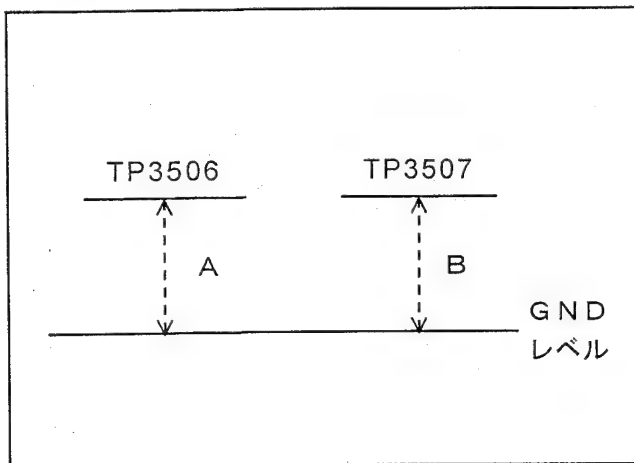
1. Connect the monitor TV to the CAMERA OUT.
2. Place the unit in the CAM (camera) mode and manual iris mode.
3. Aim the camera to a resolution chart or boll chart (VFK0580) and adjust the focus ring to the best focus for the monitor TV.
4. Adjust the viewfinder controls as follow.
  - BRIGHT VR : 12 O'clock position
  - CONTRAST VR : 12 O'clock position
  - PEAK VR : Minimum (fully CCW) position
5. Carefully observe the picture on the viewfinder and adjust VR7402 so the picture is best focus.

## 7. VTR MAIN P.C. Board

### 7-1. PLL VCD Adjustment

P.C.B.	VTR_MAIN
SPEC.	A=B
TEST	TP3506, TP3507
ADJ.	EVR (PLL_VCO)
INPUT	-----
MODE	PLAY
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	Oscilloscope

1. Connect the oscilloscope ch1 to TP3506 and ch2 to TP3507.
2. Adjust the PLL VCO on EVR so that the A is equal to B.

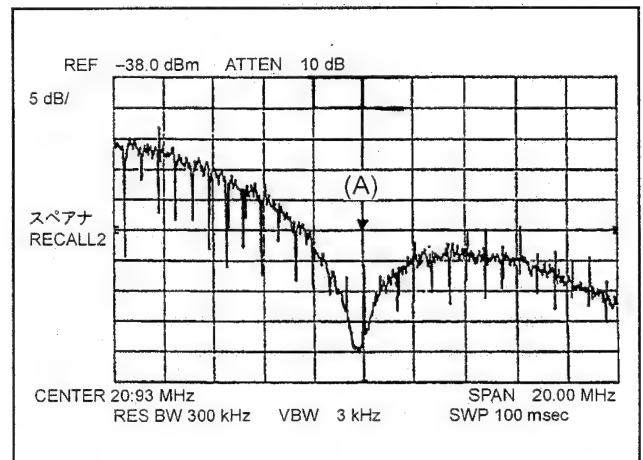


NOTE : Observe at the center of noise (TP3506).

### 7-2. 1+/D Frequency Adjustment

P.C.B.	VTR_MAIN
SPEC.	A=20.93 ± 0.1MHz
TEST	EYE PAT (50Ω terminated)
ADJ.	EVR
INPUT	-----
MODE	PLAY
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	Oscilloscope, Spectrum Analyzer

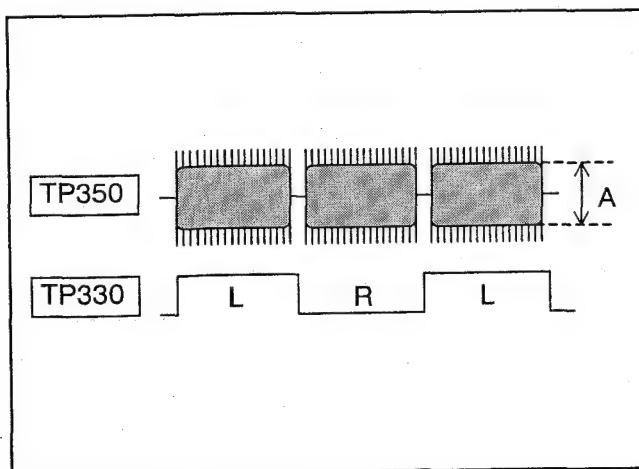
1. Adjust the EQ DL on EVR so that the A is within specification.



### 7-3. ATF Pre-Filter Gain Adjustment

P.C.B.	VTR_MAIN
SPEC.	$A=350 \pm 20\text{mVp-p}$
TEST	TP3502, TP3300
ADJ.	EVR (ATF-GAIN)
INPUT	-----
MODE	PLAY
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	Oscilloscope

1. Connect the oscilloscope ch1 to TP3502 and ch2 to TP3300.
2. Adjust the ATF GAIN on EVR so that the level A is within specification.



NOTE : Observe L CH (HSW Hi) and adjust at flat portion.

### 7-4. Playback Picture Confirmation

P.C.B.	VTR_MAIN
SPEC.	Error=MINIMUM
TEST	VIDEO OUT
ADJ.	EVR (See below)
INPUT	-----
MODE	PLAY
TAPE	NTSC : VFM3580KL (Color Bar) PAL : VFM3680KL (Color Bar)
M.EQ	MONITOR TV

1. Playback the alignment tape.
2. Observe VIDEO OUT on the Monitor TV.
3. Adjust on the EVR in below order so that the error is minimum on the monitor TV.
  - PLL SL
  - PLL POS
  - AUTO EQ
  - EQ A L
  - EQ A R
  - EQ B L
  - EQ B R

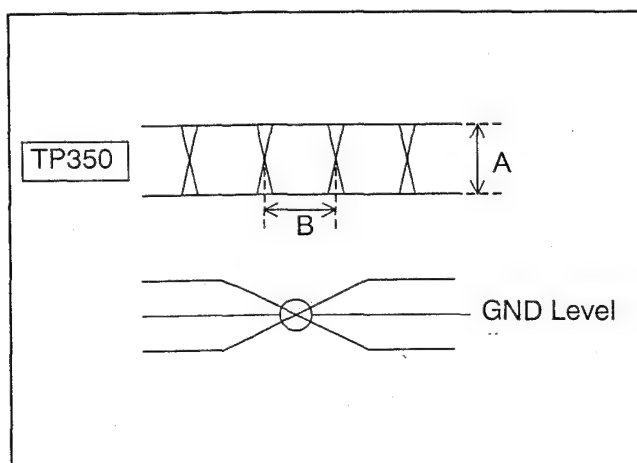
NOTE : CONCEAL, INNERECC and OUTERECC turn off before this adjustment.



## 7-5. HSE Input DUTY Adjustment

<b>P.C.B.</b>	VTR_MAIN
<b>SPEC.</b>	$A=1.3 \pm 0.1V_{p-p}$ , $B=24 \pm 1nS$
<b>TEST</b>	TP3201
<b>ADJ.</b>	VR3200 (DUTY)
<b>INPUT</b>	COLOR BAR
<b>MODE</b>	REC
<b>TAPE</b>	Blank Tape
<b>M.EQ</b>	Oscilloscope

1. Confirm that the waveform appear as shown below at REC START.
2. Expand the time axis and observe in AC mode against GND standards. Adjust VR3200 so that the cross point is equal to GND level.

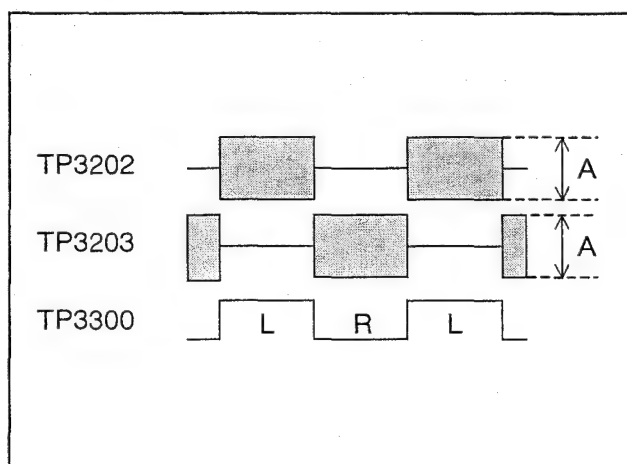


## 7-6 REC CUR Adjustment

<b>P.C.B.</b>	VTR_MAIN
<b>SPEC.</b>	$A=6.0 \pm 0.2V_{p-p}$
<b>TEST</b>	TP3202, TP3203, TP3300
<b>ADJ.</b>	EVR (REC_CURL, R)
<b>INPUT</b>	COLOR BAR
<b>MODE</b>	REC
<b>TAPE</b>	Blank Tape
<b>M.EQ</b>	Oscilloscope

1. Connect the oscilloscope to above test points.
2. Record the color bar signal.
3. Observe every point, and adjust EVR so that the level A is within specification.

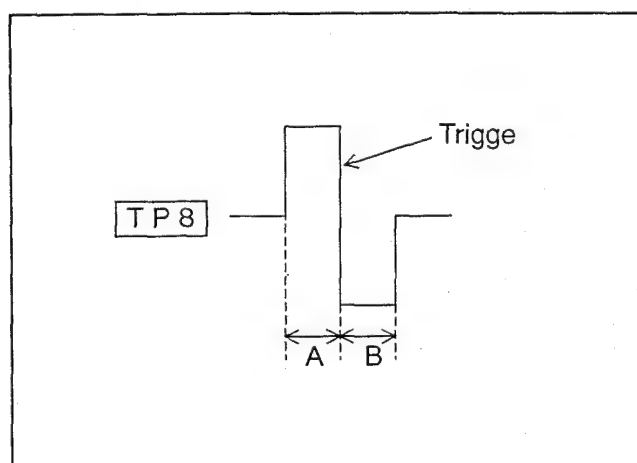
NOTE : Please turn OFF the filter of the oscilloscope.



## 7-7 AUDIO VCO Adjustment

P.C.B.	VTR_MAIN
SPEC.	A=B
TEST	TP8 (VCO_ADT)
ADJ.	EVR (AUDIO_VCO)
INPUT	COLOR BAR
MODE	E-E
TAPE	-----
M.EQ	Oscilloscope

1. Trigger at the center. (In case triggered at the center, right and left width tremble.)
2. Adjust the EVR so that the width A is equal to width B.



## 7-8 ZEBRA Adjustment

P.C.B.	VTR_MAIN
SPEC.	A=85 ± 5 IRE, B=20 ± 2 IRE
TEST	TP12 (EVF)
ADJ.	EVR (ZEVRA), VR9 (ZEVRA LEV)
INPUT	LAMP
MODE	E-E
TAPE	-----
M.EQ	Oscilloscope

<Remarks>

Level A : Adjust with the EVR.

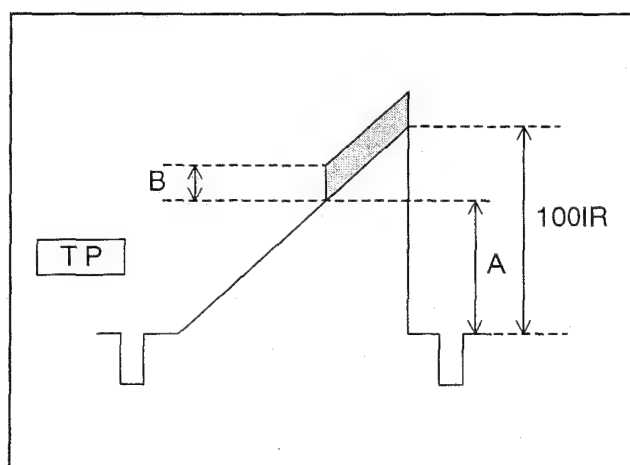
Level B : Adjust with the VR9.

<Switch Setting>

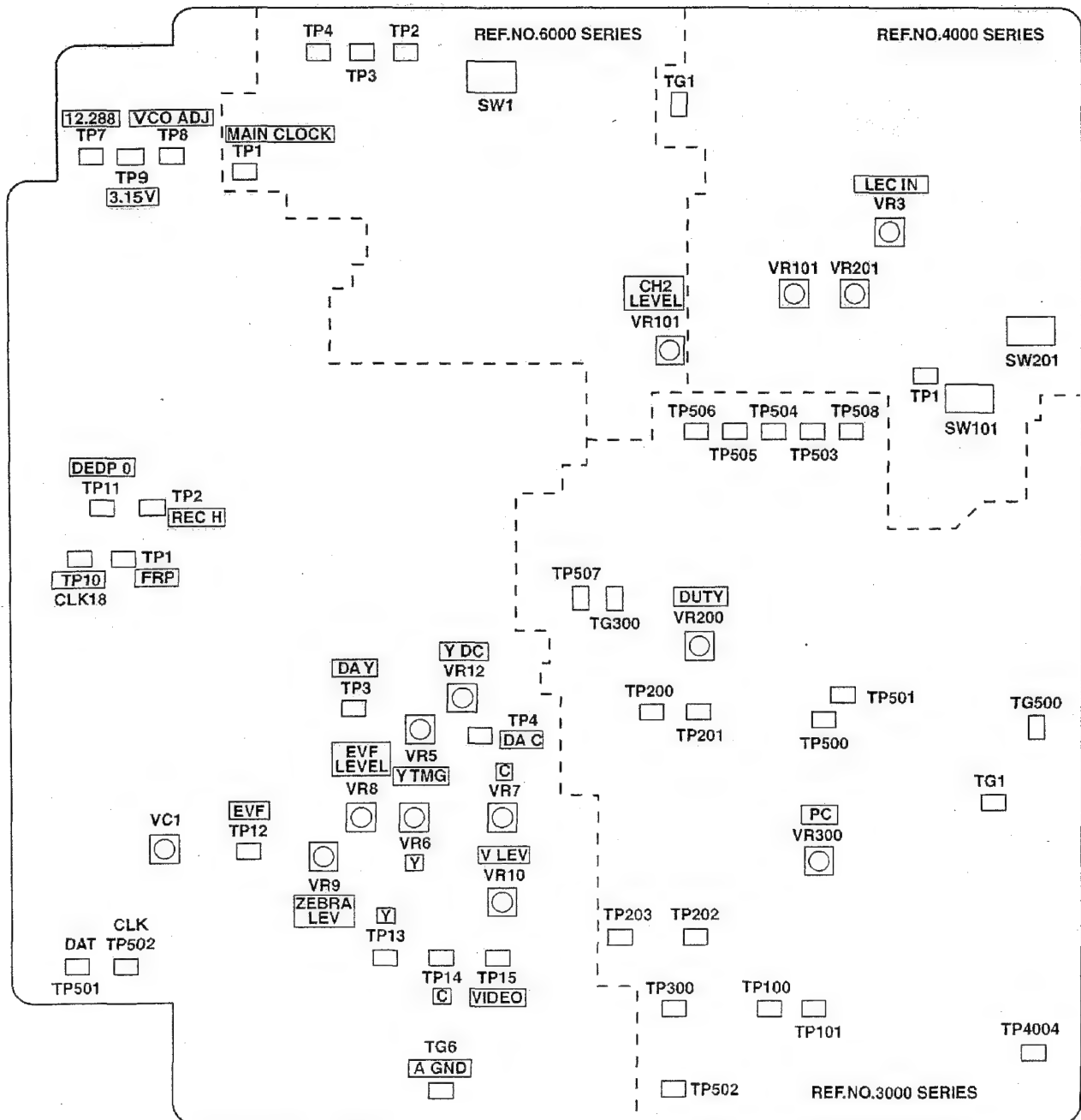
EVF : ZEBRA ON

CHARACTER OFF

1. Adjust EVR so that the level A is within specification.
2. Adjust VR9 so that the level B is within specification.
3. After complete the adjustment, turn off the ZEBRA.

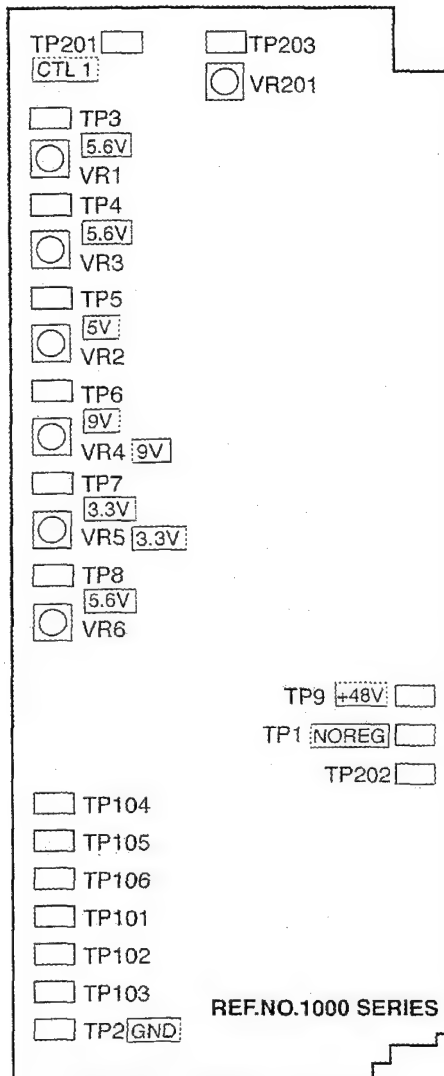


# VTR MAIN C.B.A



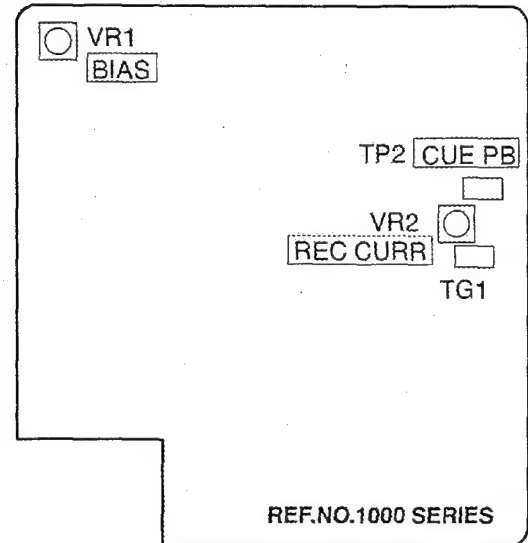
(COMPONENT SIDE)

## POWER C.B.A



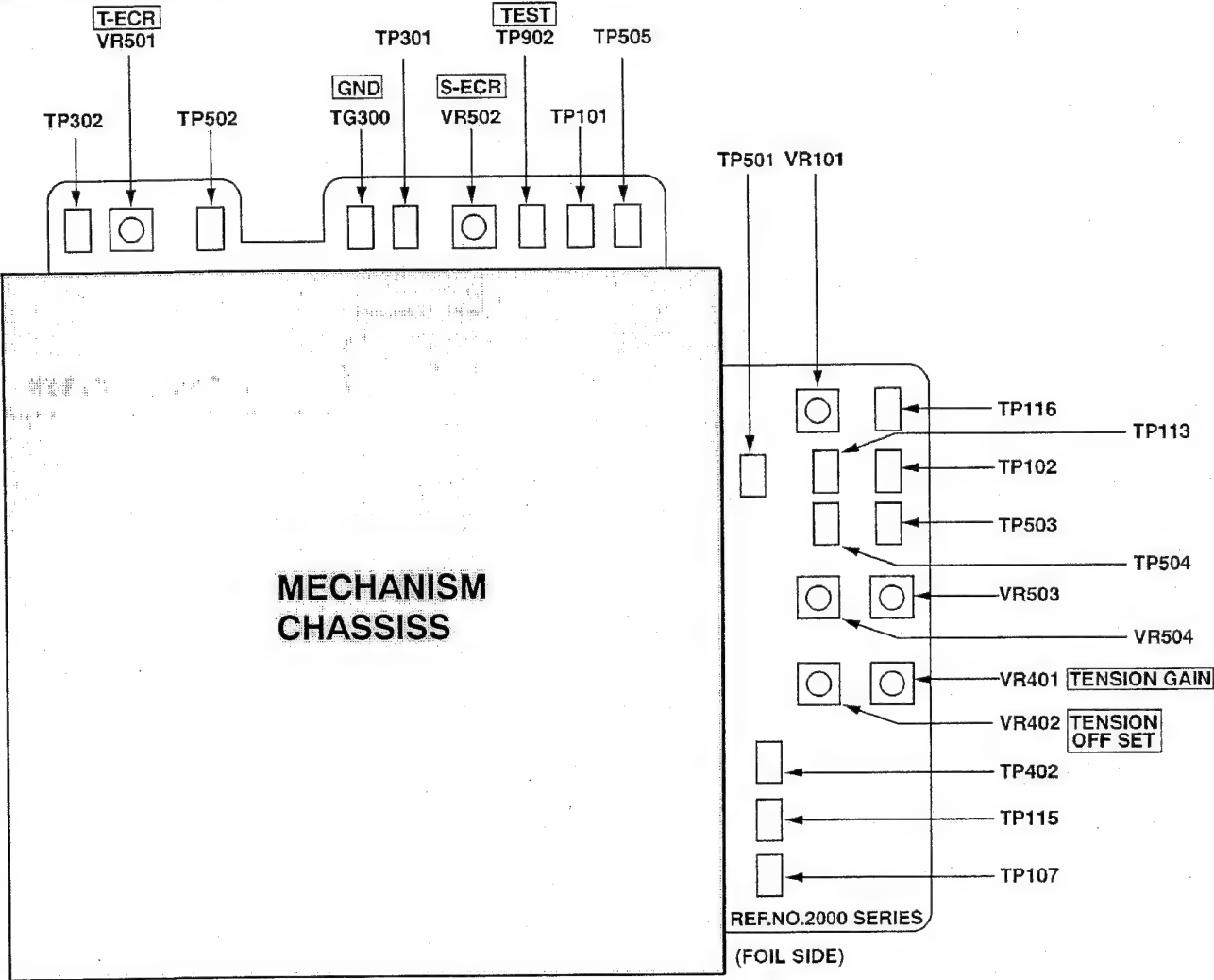
(COMPONENT SIDE)

## REAR JACK C.B.A

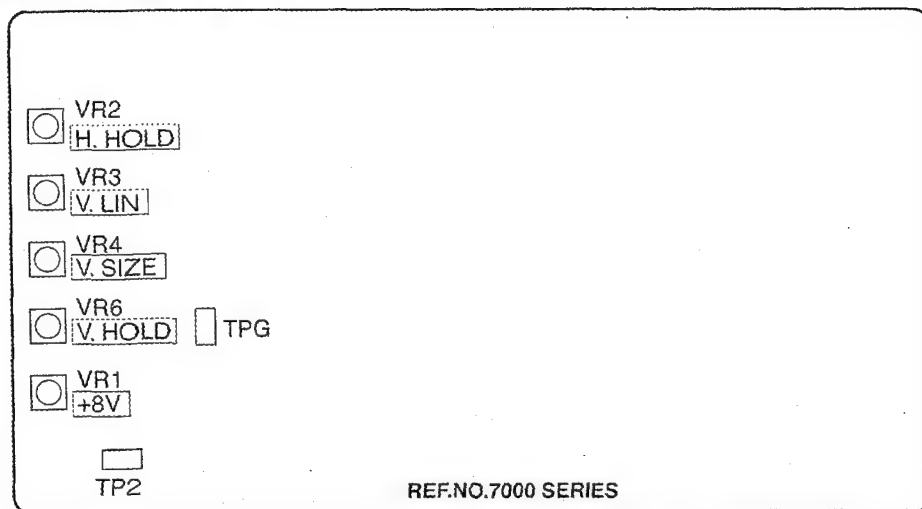


LOCATION OF TEST POINT & CONTROLS

SERVO C.B.A.

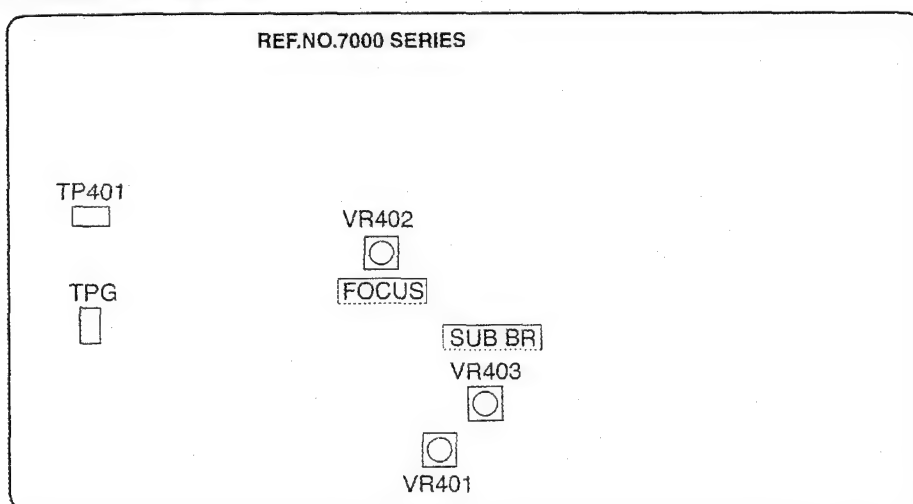


## V DEF C.B.A.



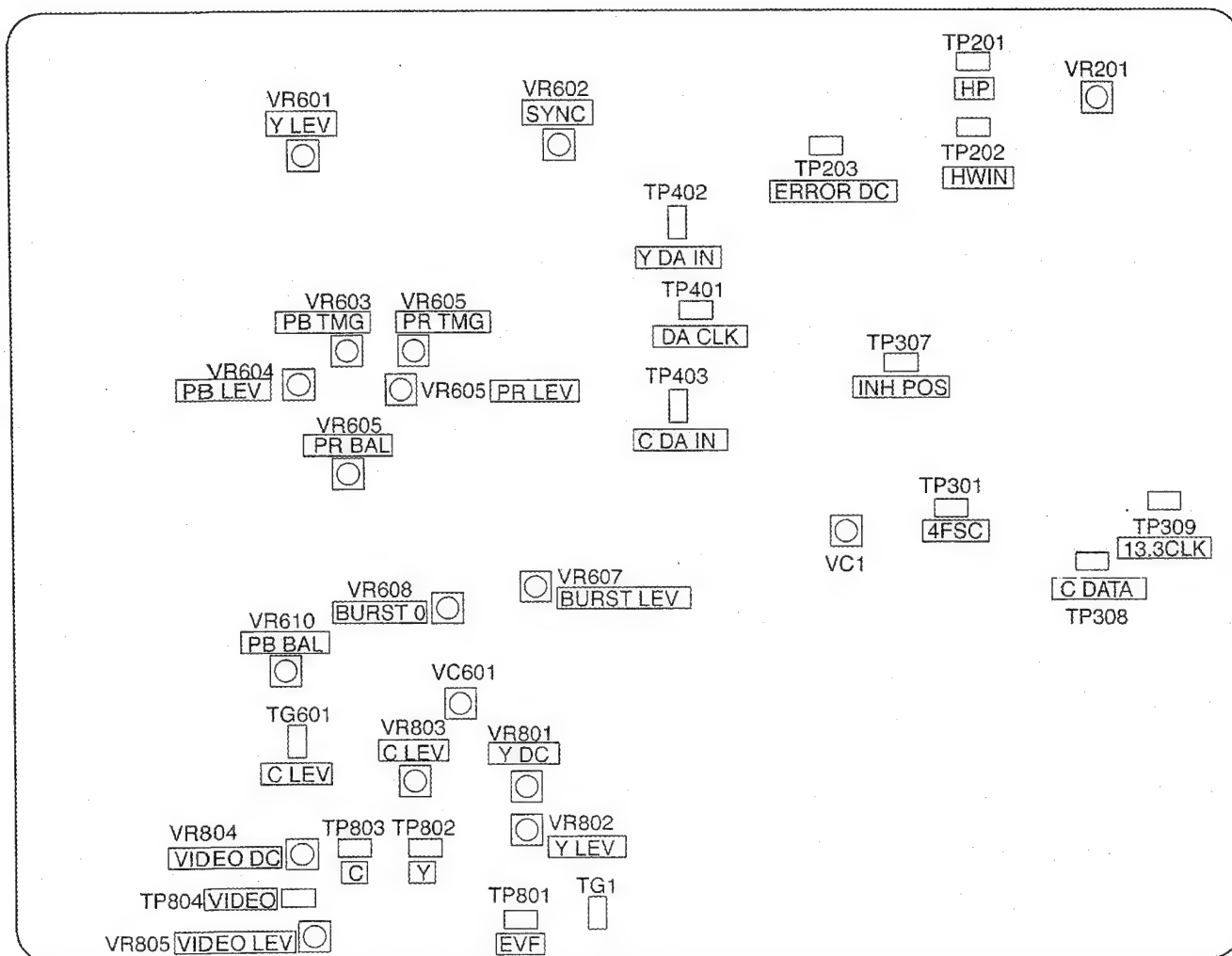
(COMPONENT SIDE)

## H DEF C.B.A.



(FOIL SIDE)

# 1394 & PRE SHUFFLE C.B.A



(COMPONENT SIDE)

# SECTION 5

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## BLOCK DIAGRAMS

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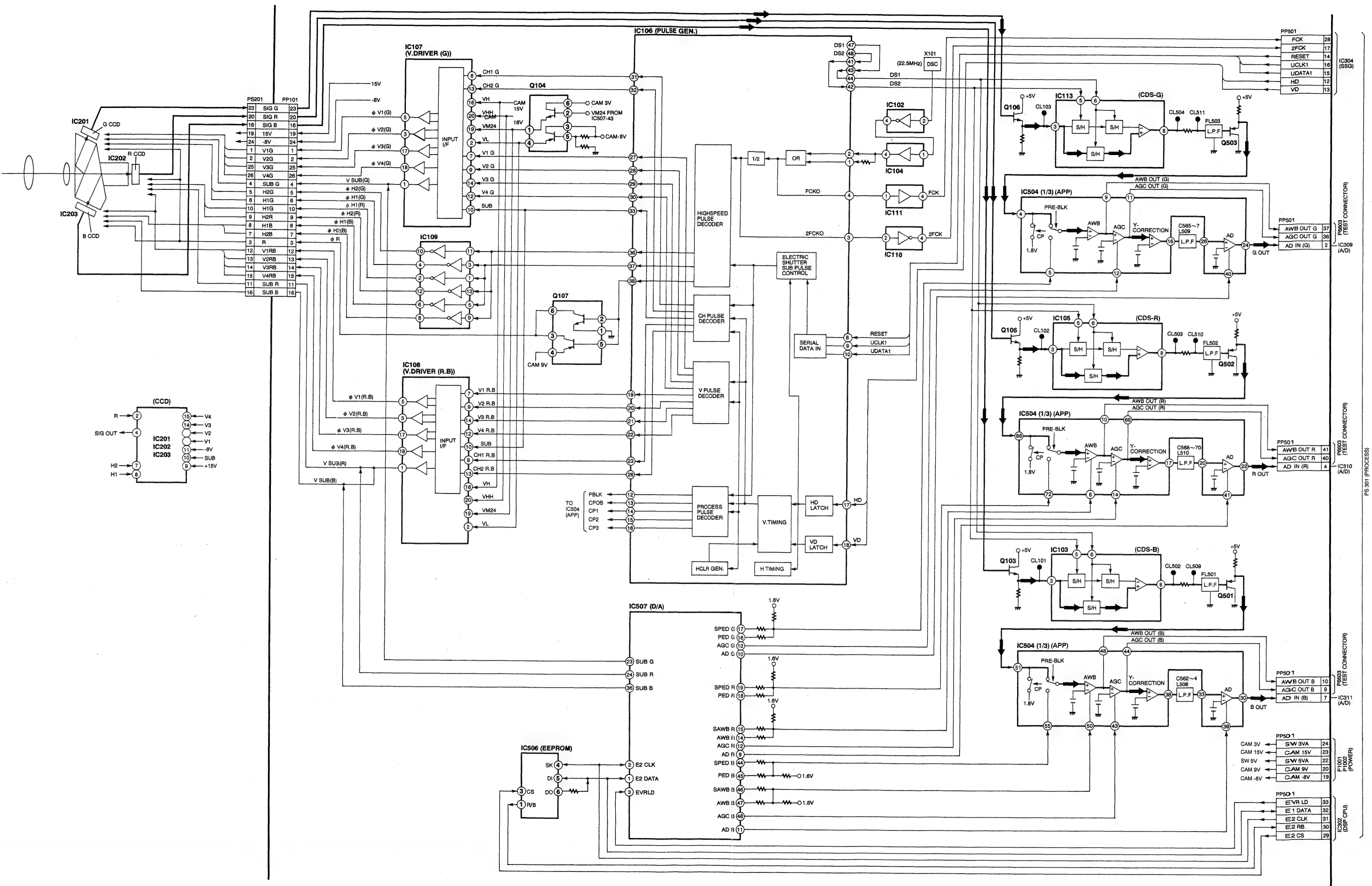
### CONTENTS

OVERALL BLOCK DIAGRAM .....	BLK-2
CCD & SENSOR BLOCK DIAGRAM.....	BLK-3
PROCESS BLOCK DIAGRAM .....	BLK-4
1394 & PRE SHUFFLE BLOCK DIAGRAM.....	BLK-5
VIDEO MAIN BLOCK DIAGRAM.....	BLK-6
RF BLOCK DIAGRAM.....	BLK-7
AUDIO & REAR JACK BLOCK DIAGRAM .....	BLK-8
SYSTEM CONTROL BLOCK DIAGRAM.....	BLK-9
SERVO CONTROL BLOCK DIAGRAM .....	BLK-10

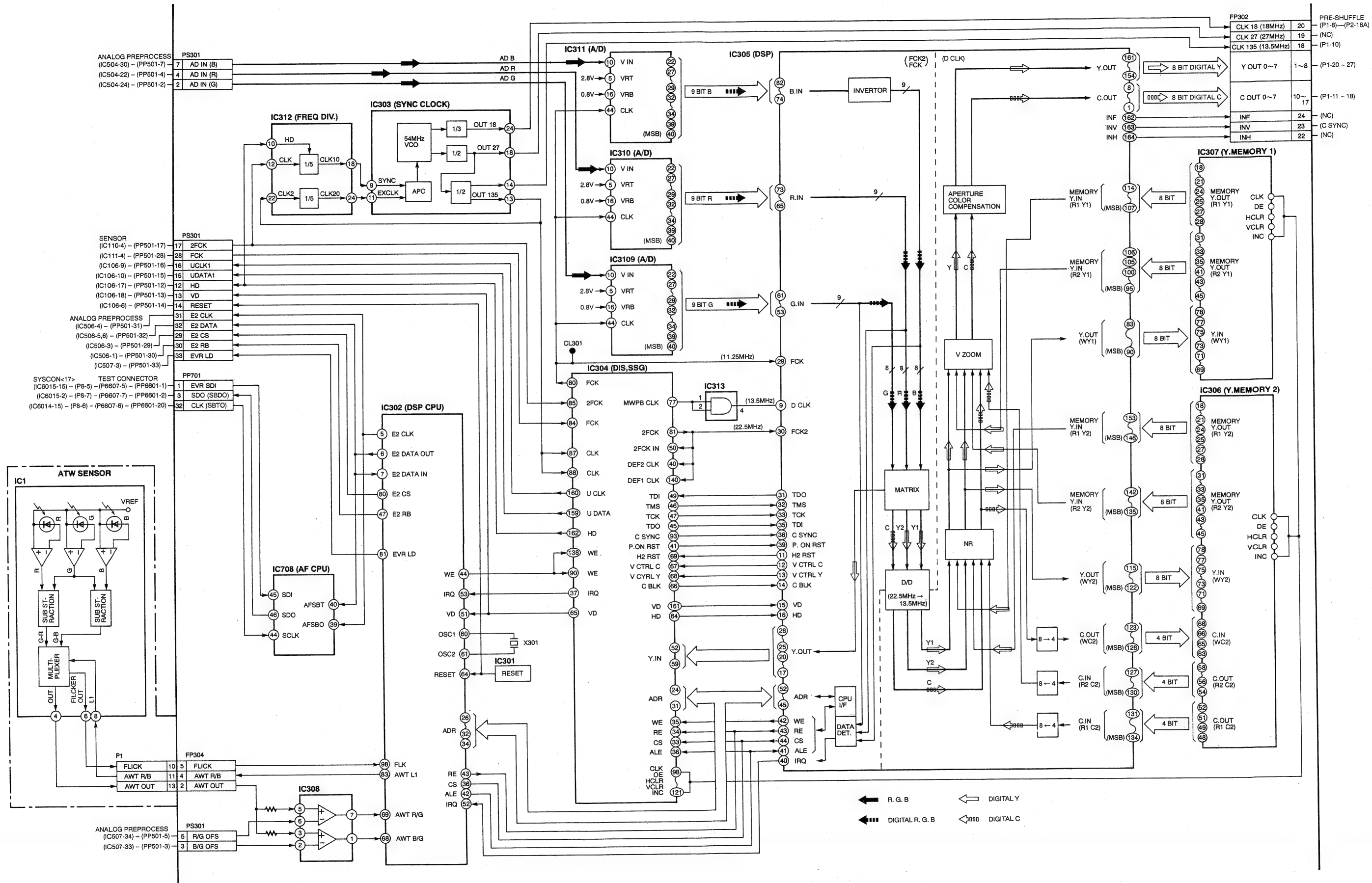




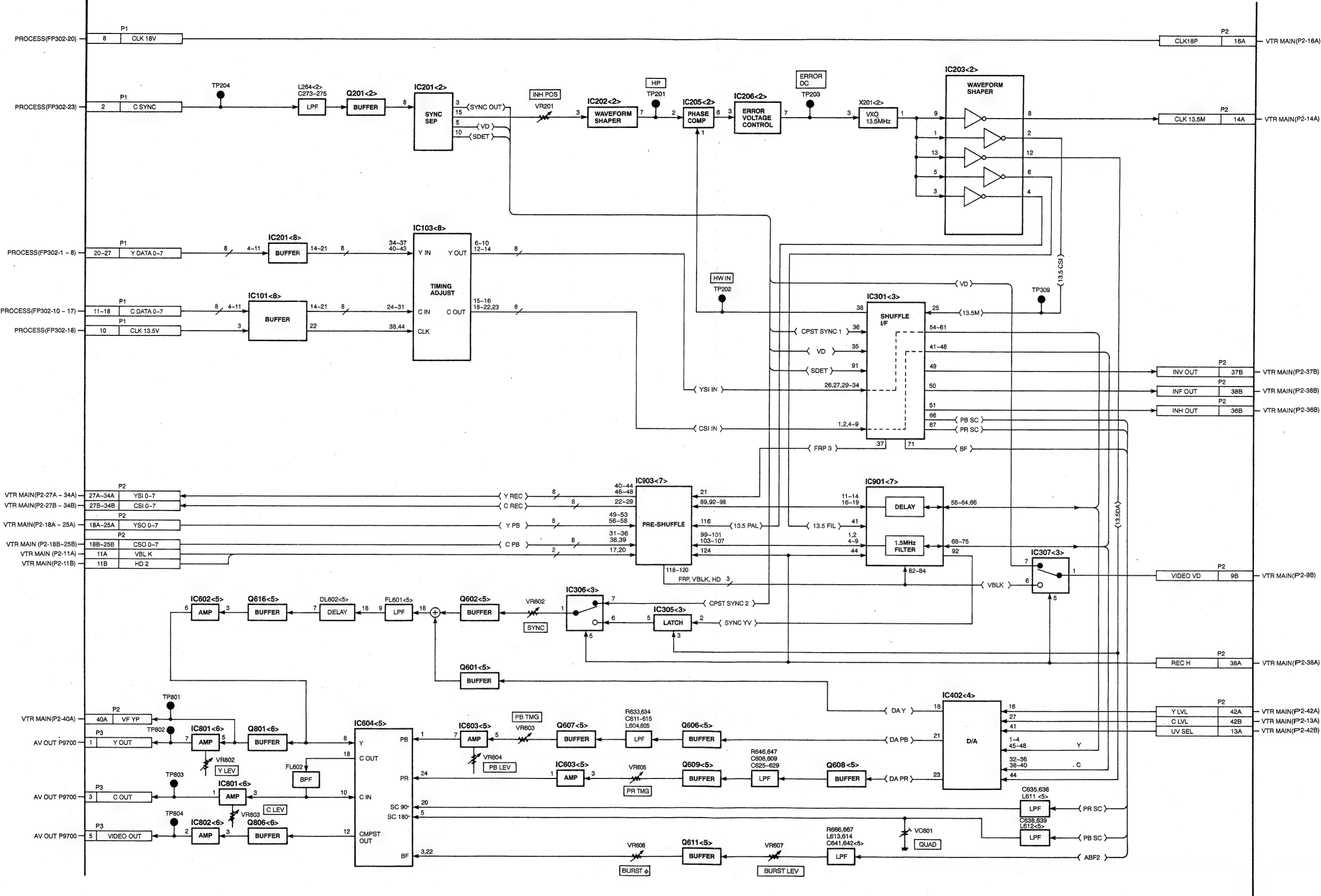
# CCD & SENSOR BLOCK DIAGRAM



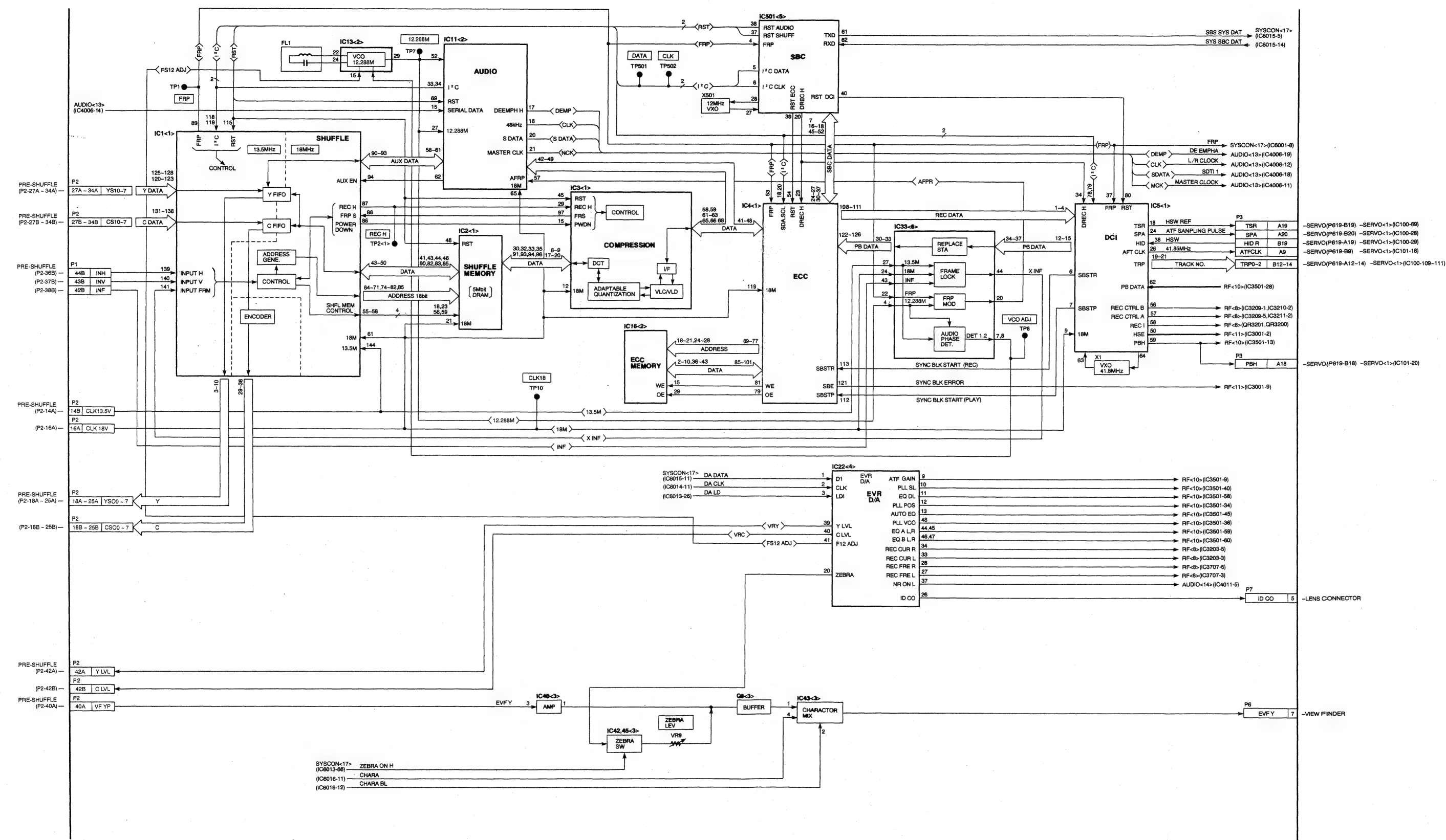
PROCESS BLOCK DIAGRAM



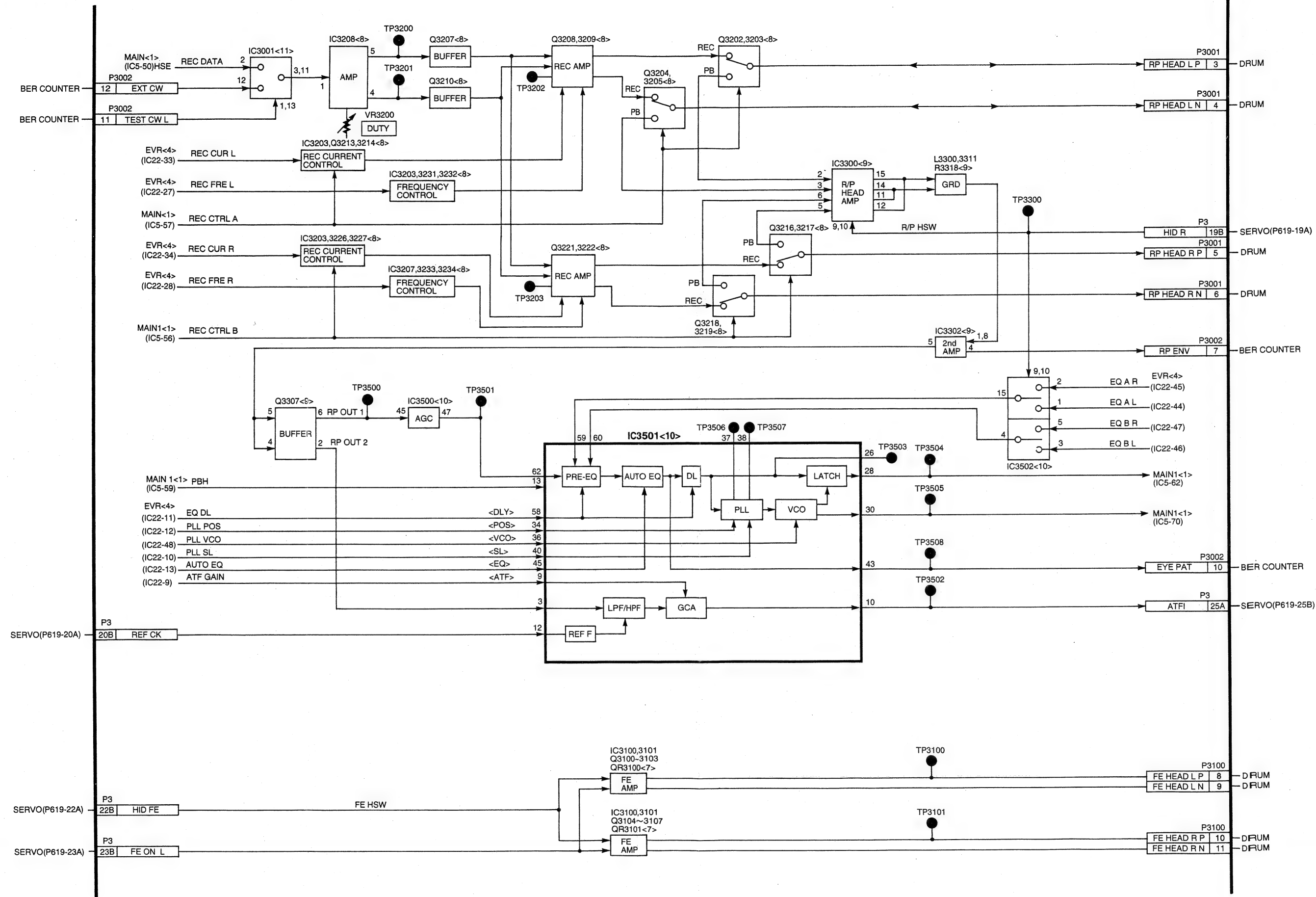
1394 & PRE SHUFFLE BLOCK DIAGRAM



VIDEO MAIN BLOCK DIAGRAM

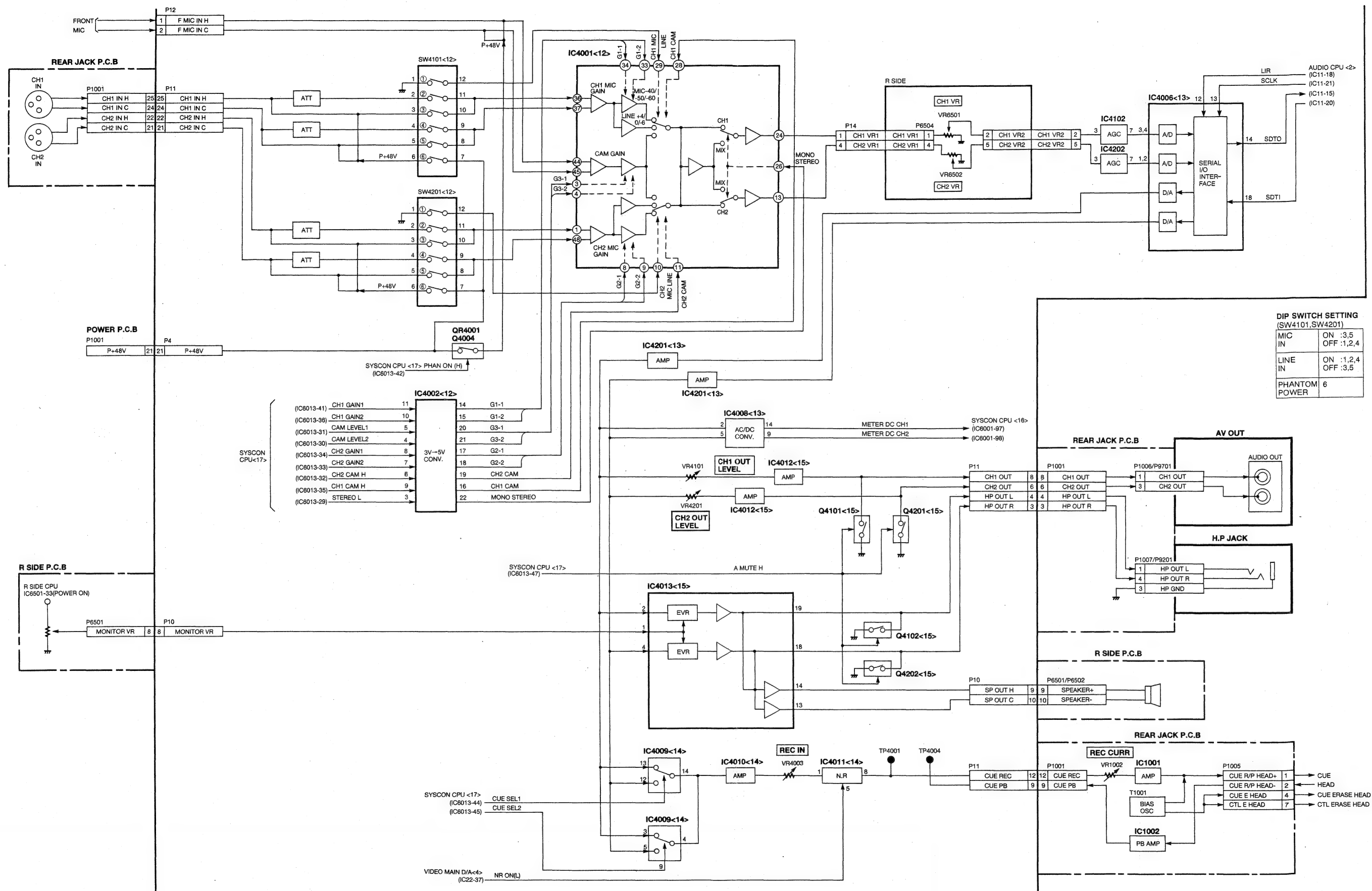


RF BLOCK DIAGRAM

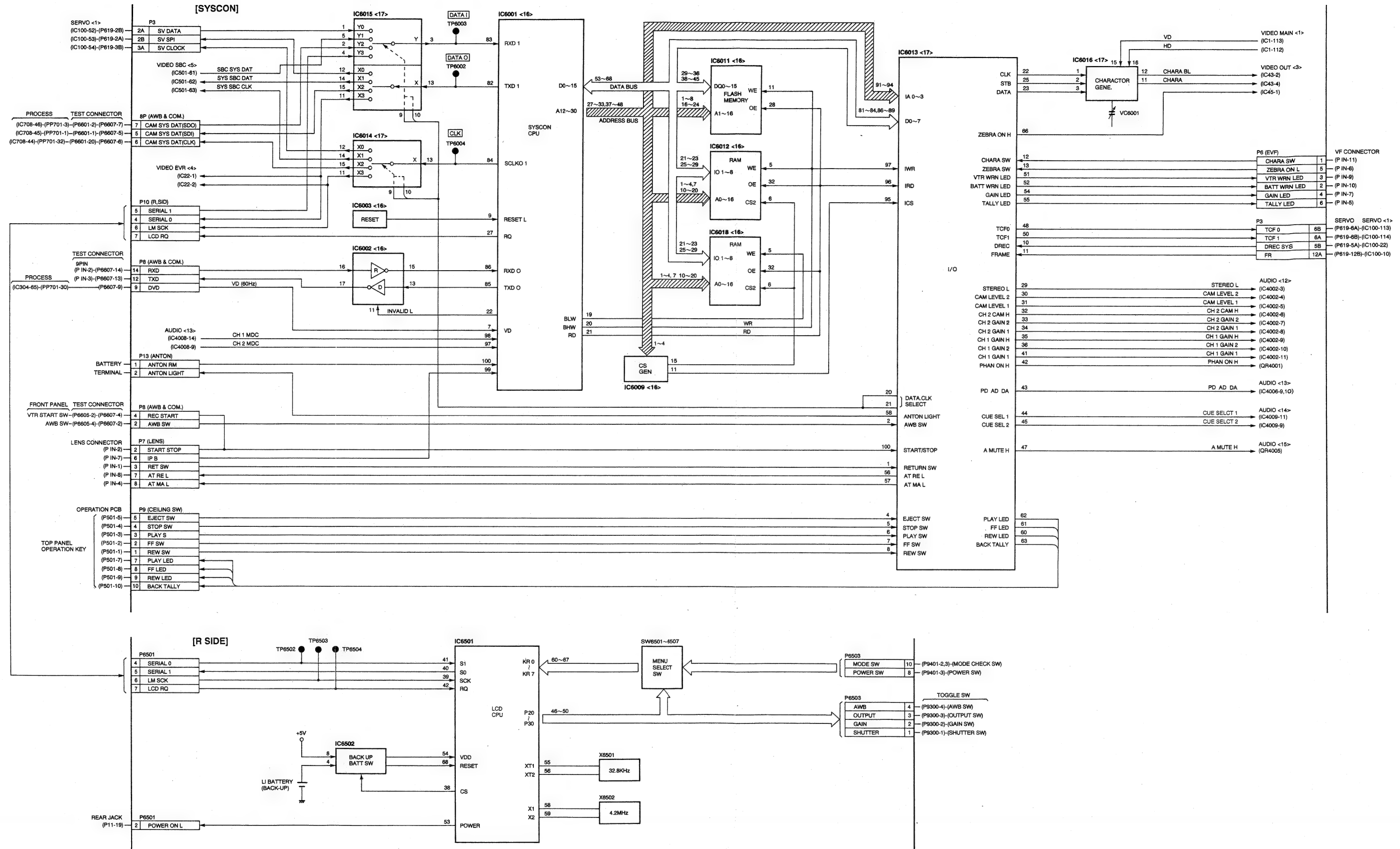




## AUDIO & REAR JACK BLOCK DIAGRAM

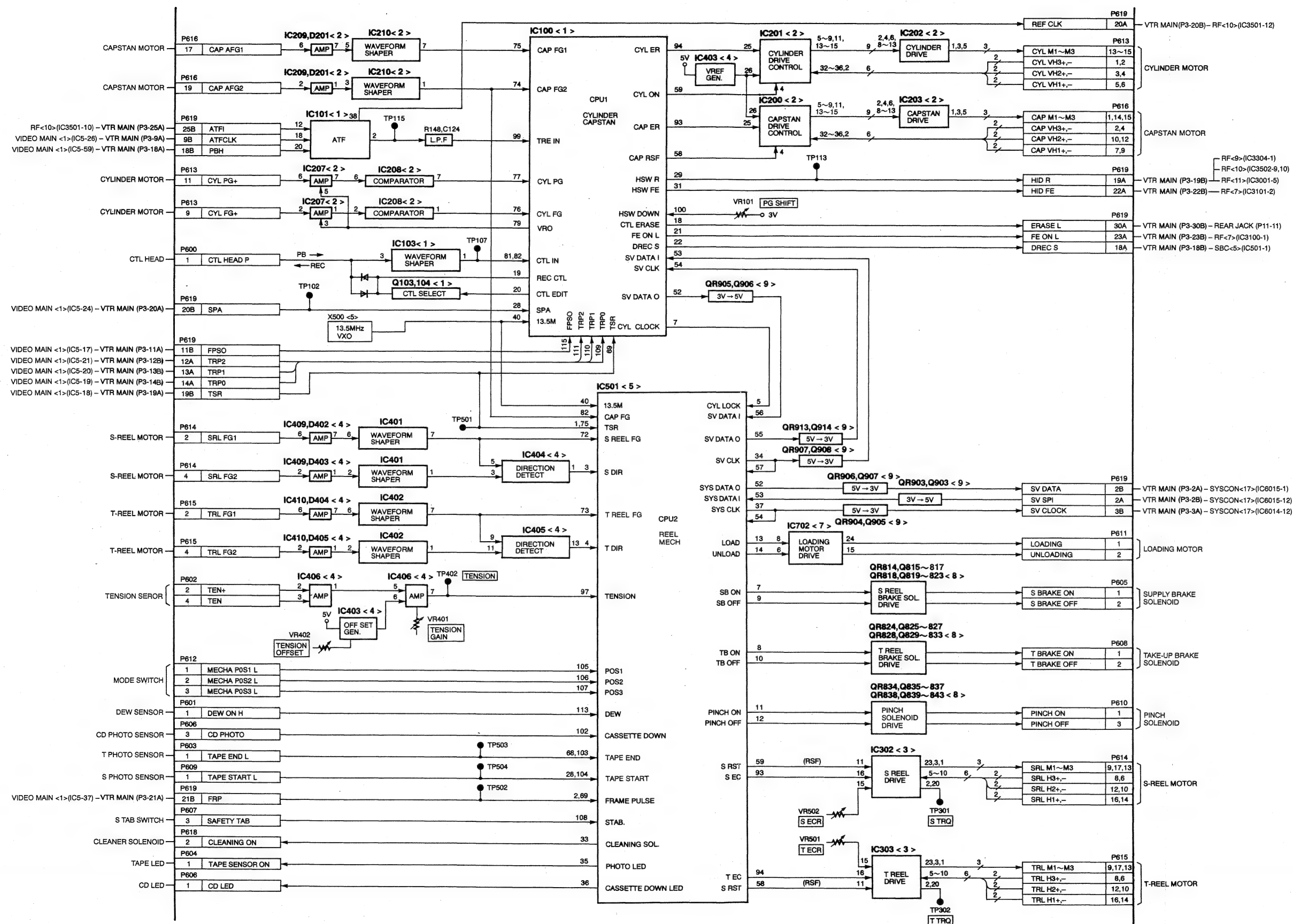


## SYSTEM CONTROL & R SIDE BLOCK DIAGRAM





## SERVO CONTROL BLOCK DIAGRAM

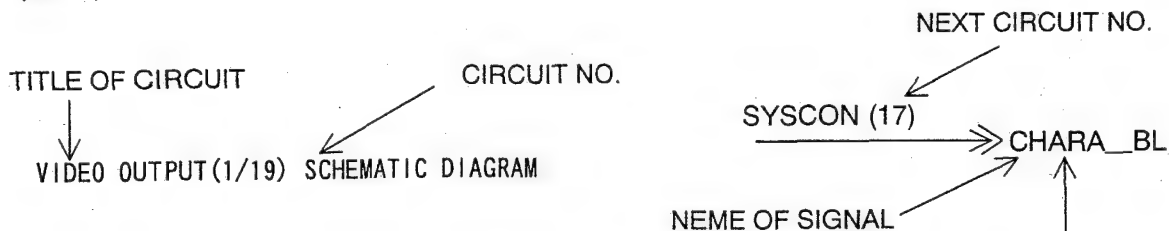


# SECTION 6

## SCHEMATIC DIAGRAMS

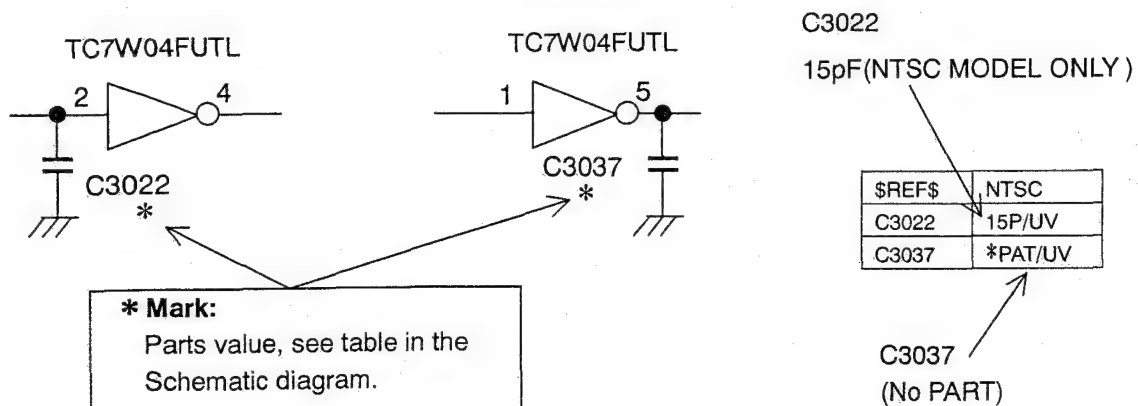
### NOTE

(EX 1)



THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC. PLESE REFER TO 「SYSTEM CONTROL(1/19) SCHEMATIC DIAGRAM」

(EX 2)



### IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.

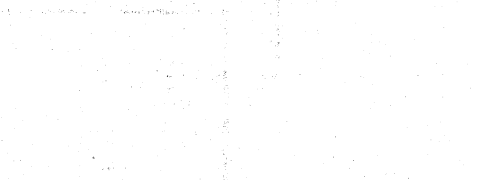
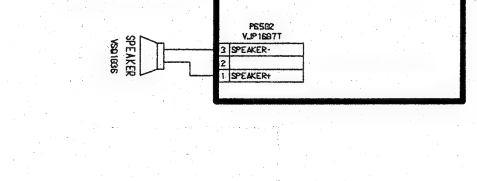
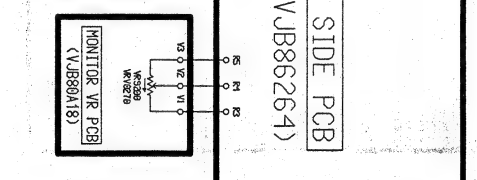
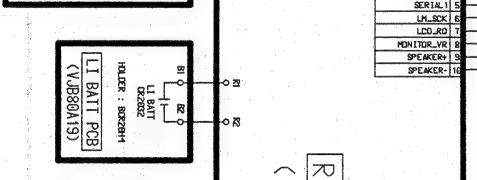
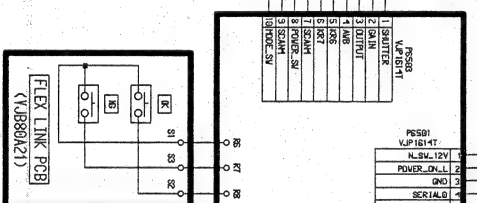
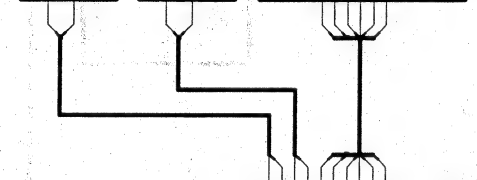
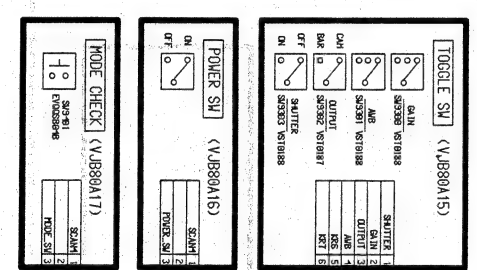
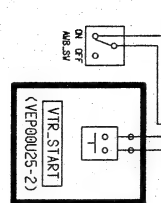
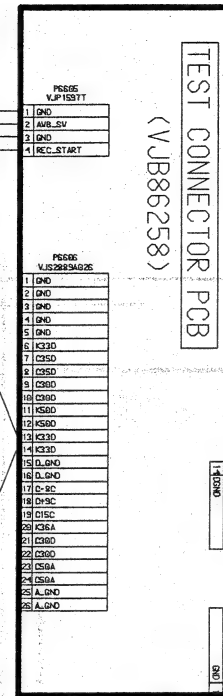
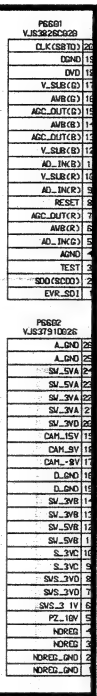
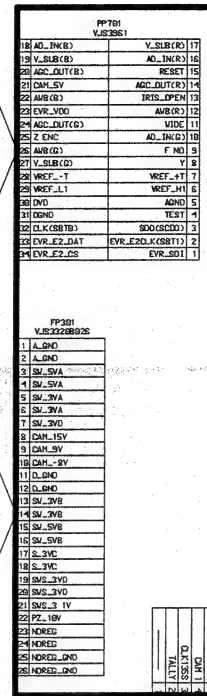
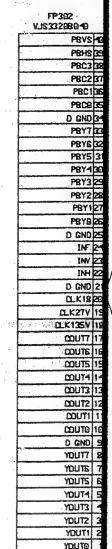
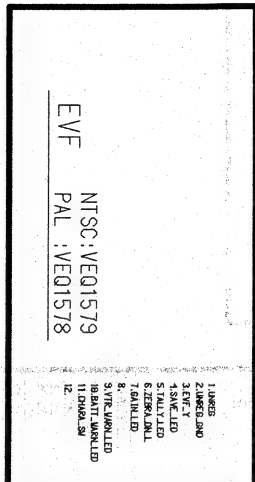
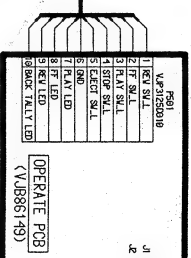
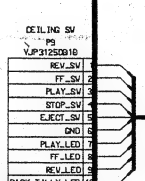
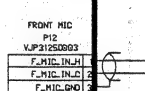
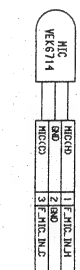
WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST.

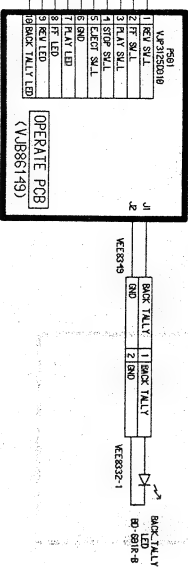
AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

## CONTENTS

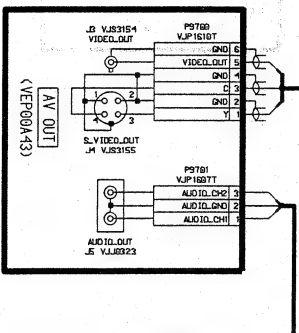
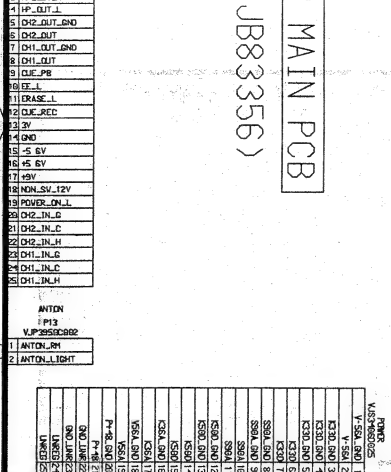
OVERALL for NTSC .....	SCM001
OVERALL for PAL .....	SCM002
SERVO .....	SCM003
REAR JACK .....	SCN013
AV OUT for NTAC .....	SCM015
AV PUT for PAL .....	SCM016
POWER .....	SCM017
SERVO VTR FLEX .....	SCM020
VTR MAIN (VIDEO MAIN 1) .....	SCM021
VTR MAIN (VIDEO MAIN 2) .....	SCM022
VTR MAIN (VIDEO OUTPUT) .....	SCM023
VTR MAIN (VIDEO EVR) .....	SCM024
VTR MAIN (VIDEO SBC) .....	SCM025
VTR MAIN (VIDEO LOCK) .....	SCM026
VTR MAIN (RF) .....	SCM027
VTR MAIN (AUDIO AGC) .....	SCM032
VTR MAIN (AUDIO) .....	SCM033
VTR MAIN (SYSCN) .....	SCM036
VTR MAIN (I/F-1) .....	SCM038
VTR MAIN (I/F-2) .....	SCM039
VTR MAIN (COMPARISON CHART) .....	SCM040
TEST PLUG .....	SCM041
EVR FLEX .....	SCM042
SENSOR for NTSC .....	SCM043
SENSOR for NTSC (ANALOG PREPROCESS) .....	SCM044
SENSOR for PAL .....	SCM045
SENSOR for PAL (ANALOG PREPROCESS) .....	SCM046
PROCESS for NTSC .....	SCM047
PROCESS for NTSC (LENS DRIVE) .....	SCM048
PROCESS for PAL .....	SCM049
PROCESS for PAL (LENS DRIVE) .....	SCM050
ATW SENSOR .....	SCM051
OPERATE .....	SCM052
CRT MASK .....	SCM053
DVCPRO TERMINAL .....	SCM054
TOGGLE SW etc. ....	SCM055
R SIDE .....	SCM056
H DEF .....	SCM057
V DEF .....	SCM058
CN .....	SCM059
FRONT .....	SCM060
1394 & PRESHUFFLE .....	SCM061



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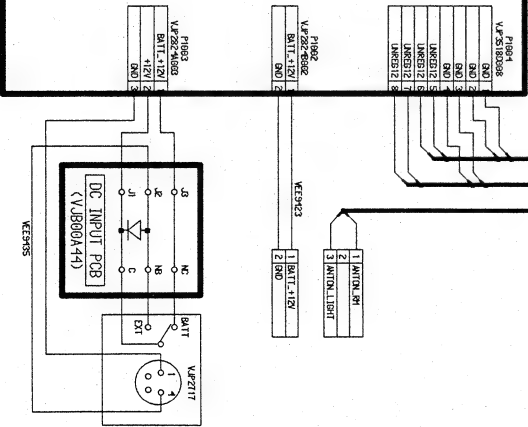
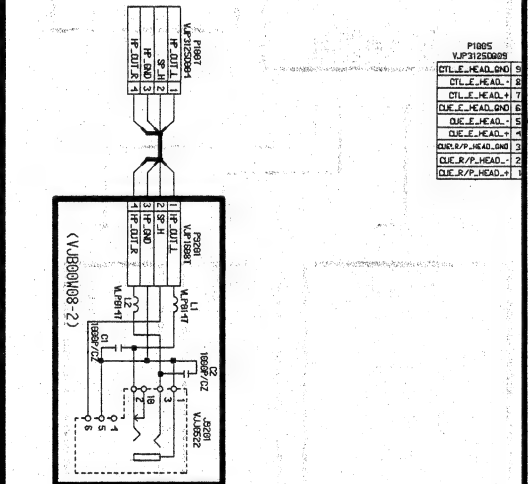
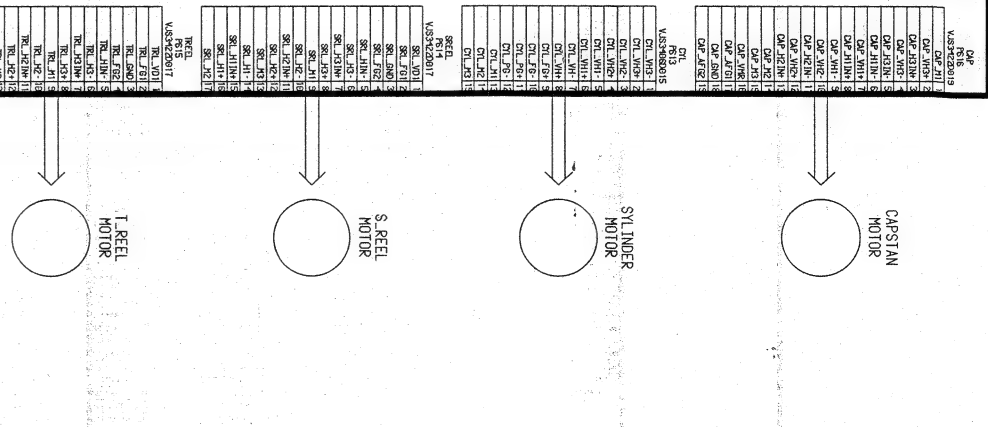
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SERVO PCB (VJB822-12)	
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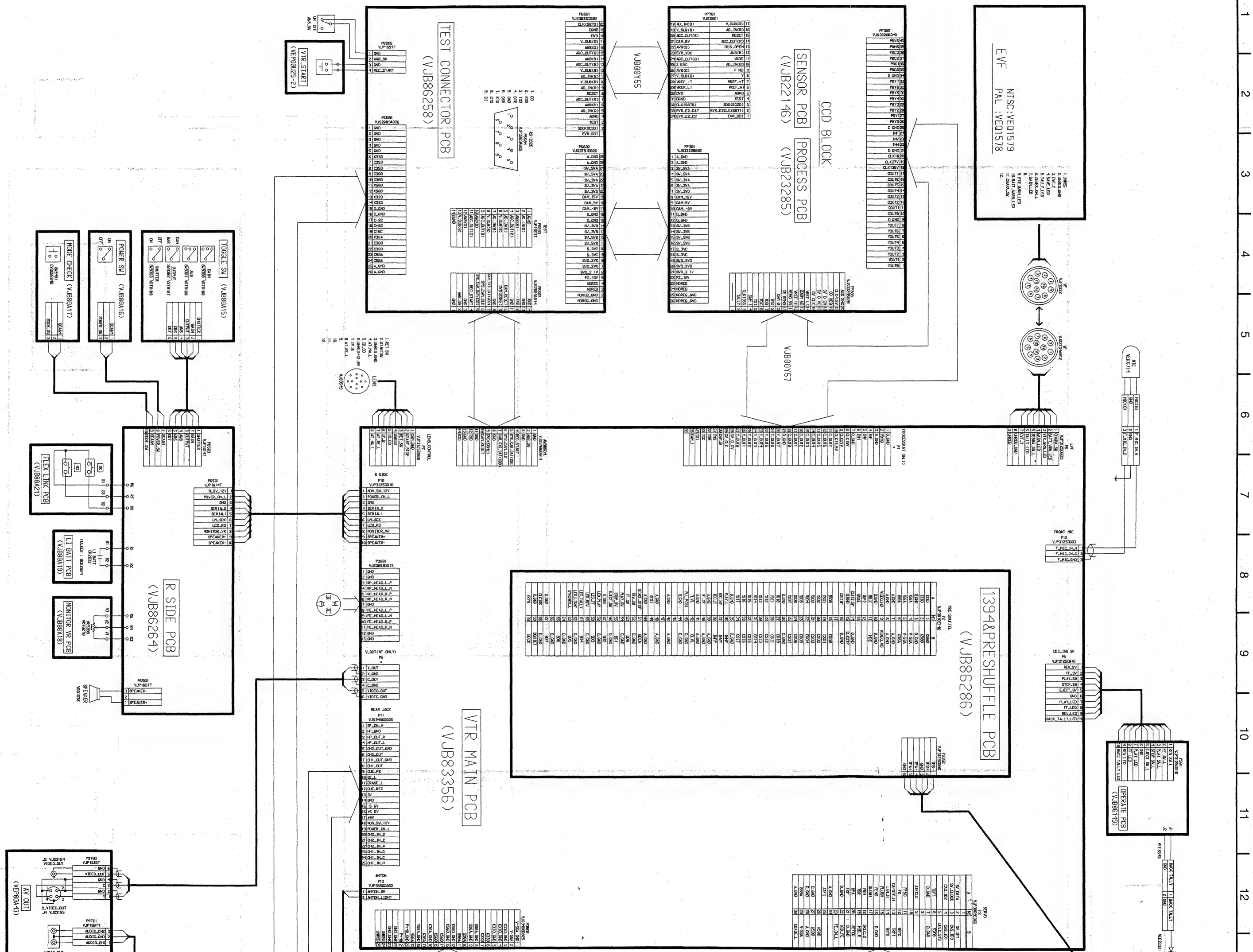
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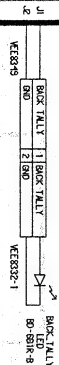
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COMPONENT NAME	OVERALL for NTSC	MODEL NO.	0
CIRCUIT BOARD NO.		AJ-D215T/P	
SCM			







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VJB00156

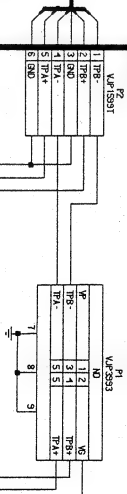
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TEST CONNECTOR	
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FROM MECHANISM

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67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

DVCPRO TERMINAL PCB  
(VJB86280)



CAPSTAN MOTOR

SYNDER MOTOR

S. REEL MOTOR

T. REEL MOTOR

SERVO	
A	B
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
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45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

SERVO PCB  
(VJB82212)

SERVO	
A	B
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
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23	24
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27	28
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45	46
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63	64
65	66
67	68
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71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

POWER PCB  
(VJB81179)

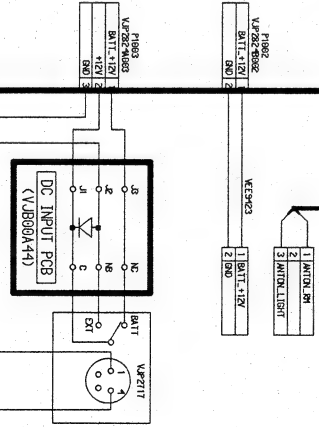
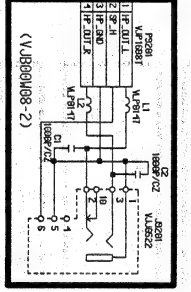
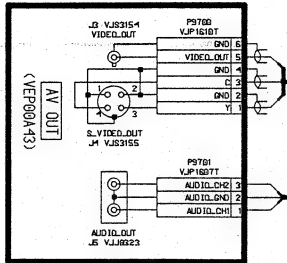
SERVO	
A	B
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
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39	40
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43	44
45	46
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59	60
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63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

A/C HEAD

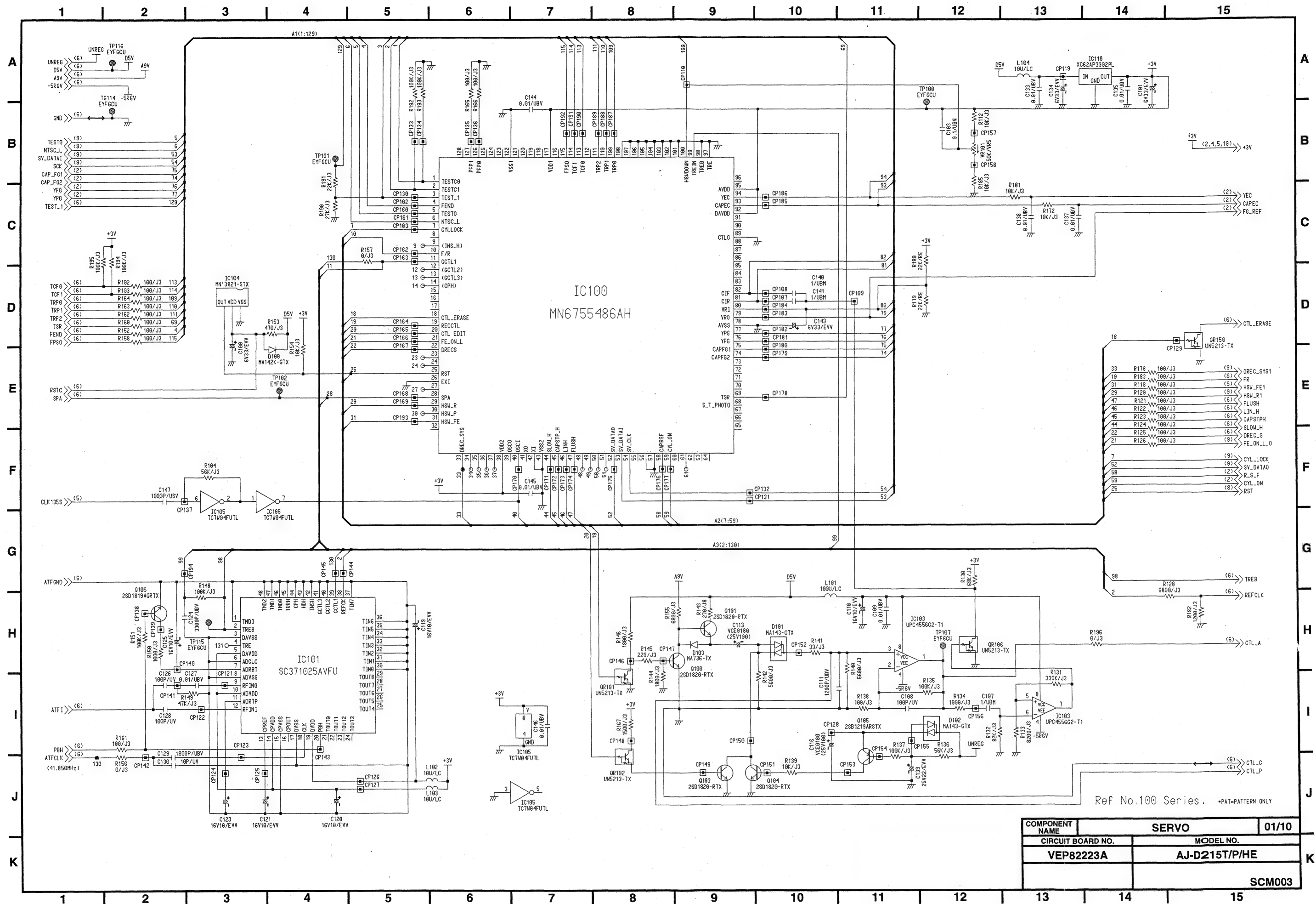
SERVO	
A	B
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
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63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

SERVO	
A	B
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
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75	76
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97	98
99	100

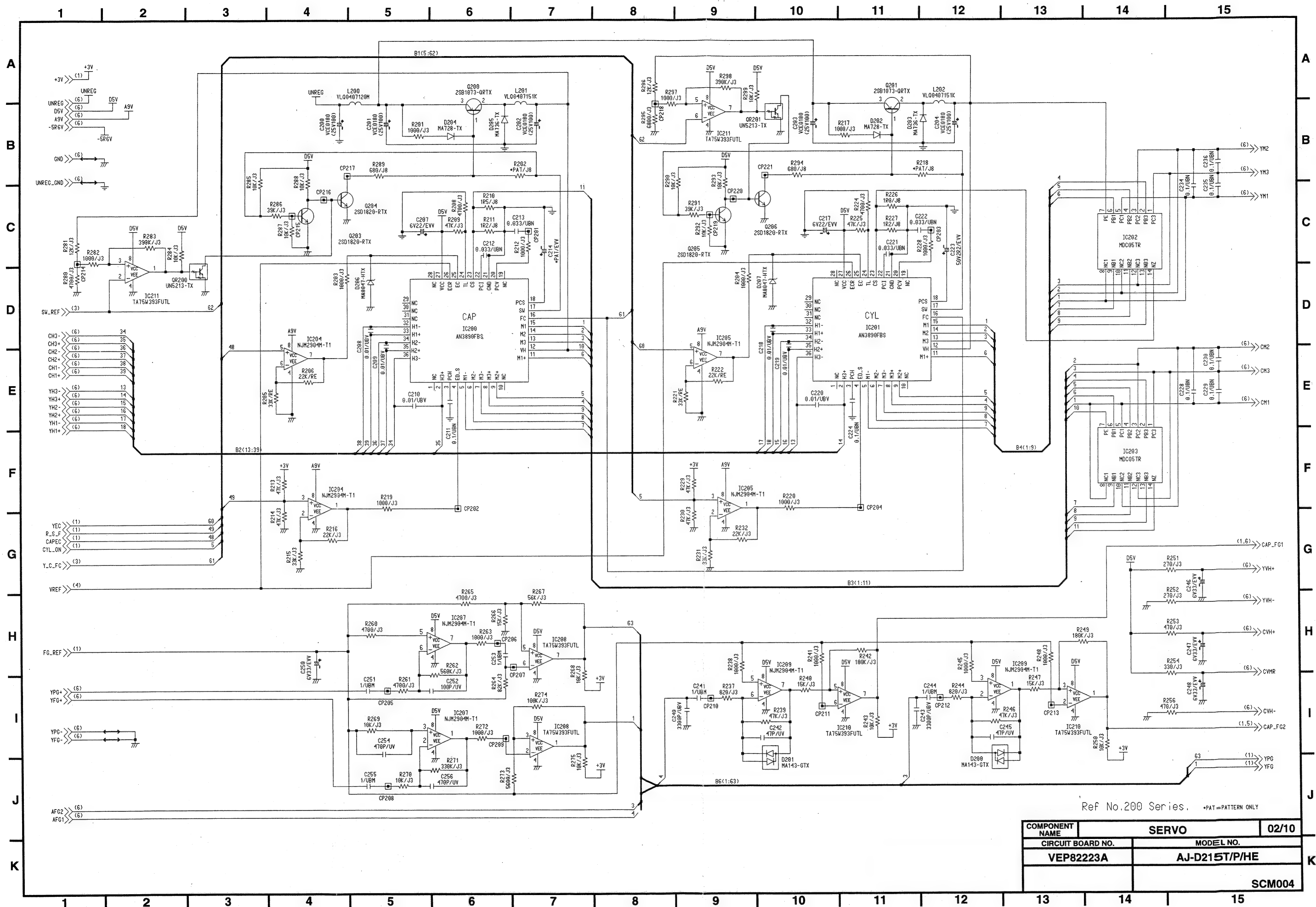
REAR JACK PCB  
(VJB84297)



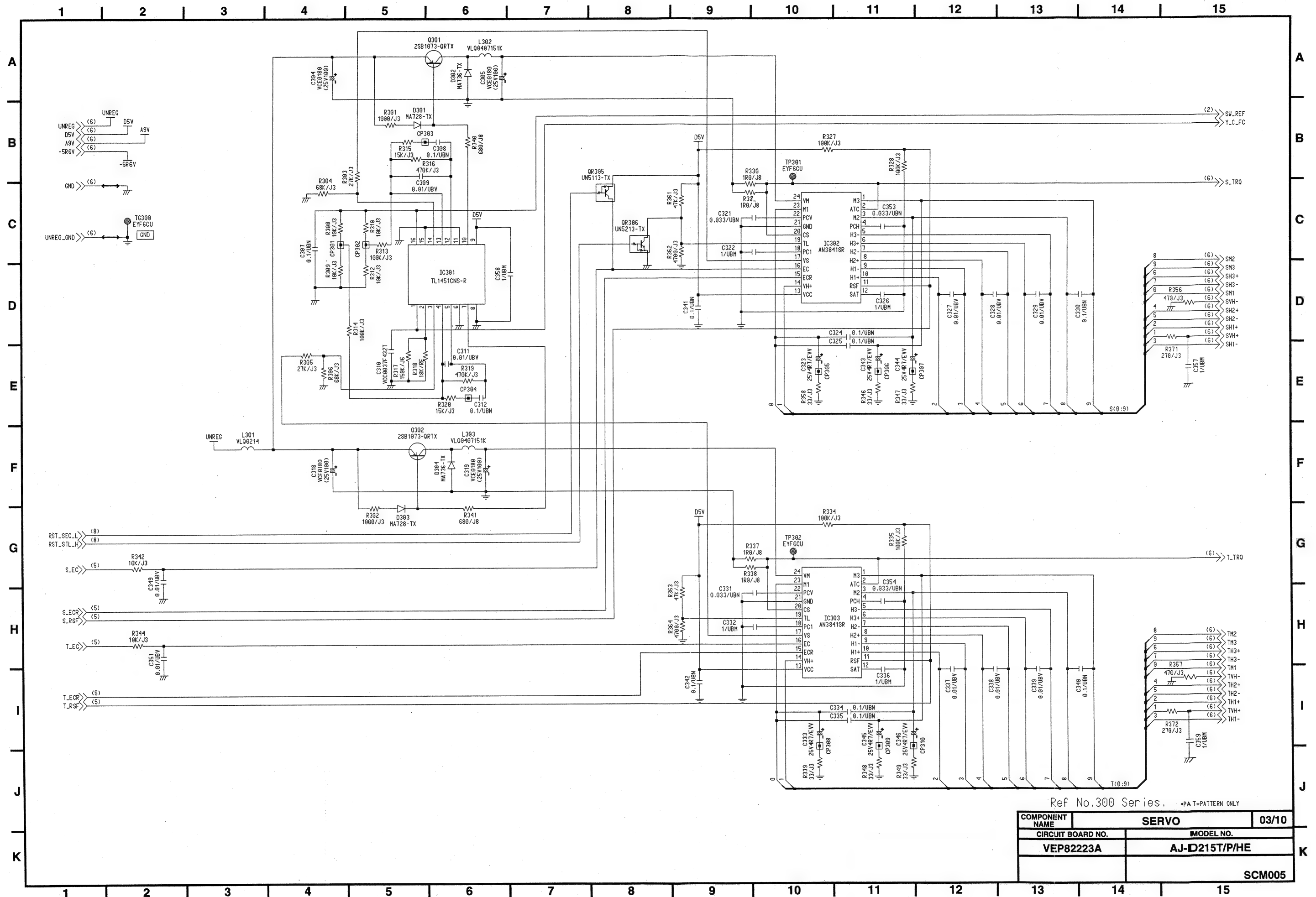
COMPONENT NAME	
CIRCUIT BOARD NO.	
OVERALL for PAL	
MODEL NO.	
AJ-D215HE	
SCM002	

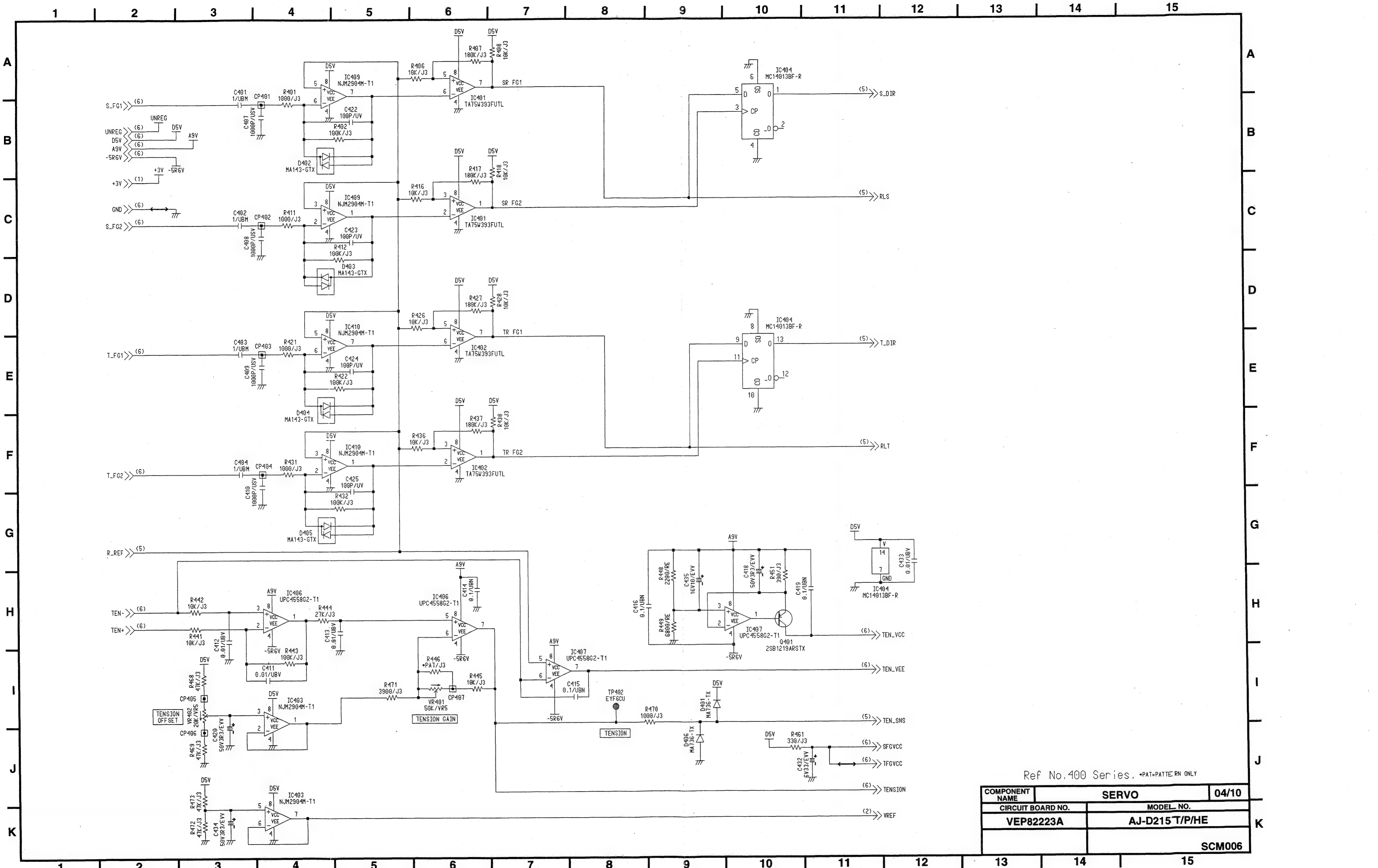


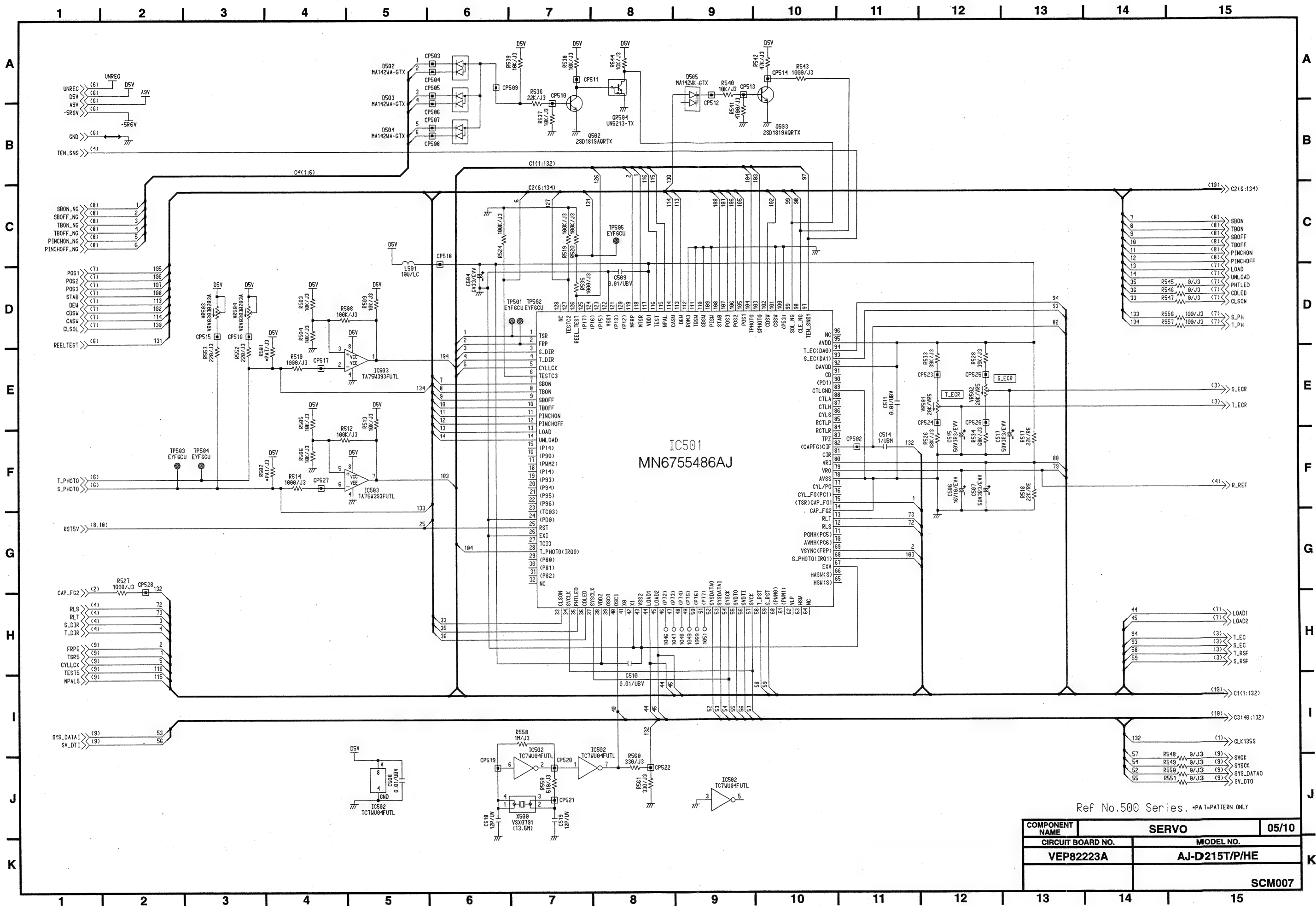




COMPONENT NAME		SERVO	02/10
CIRCUIT BOARD NO.		MODEL NO.	
VEP82223A		AJ-D215T/P/HE	
		SCM004	

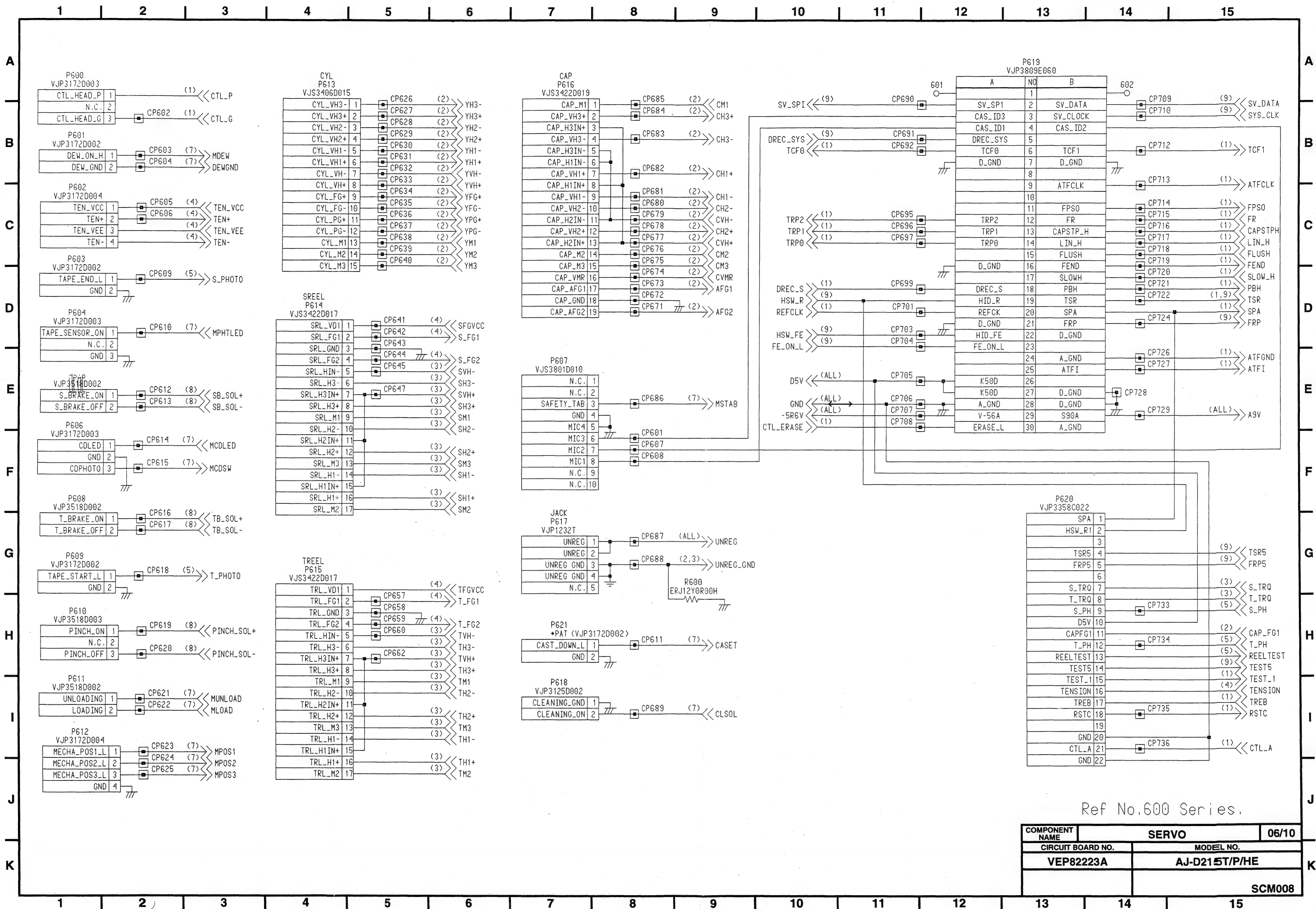


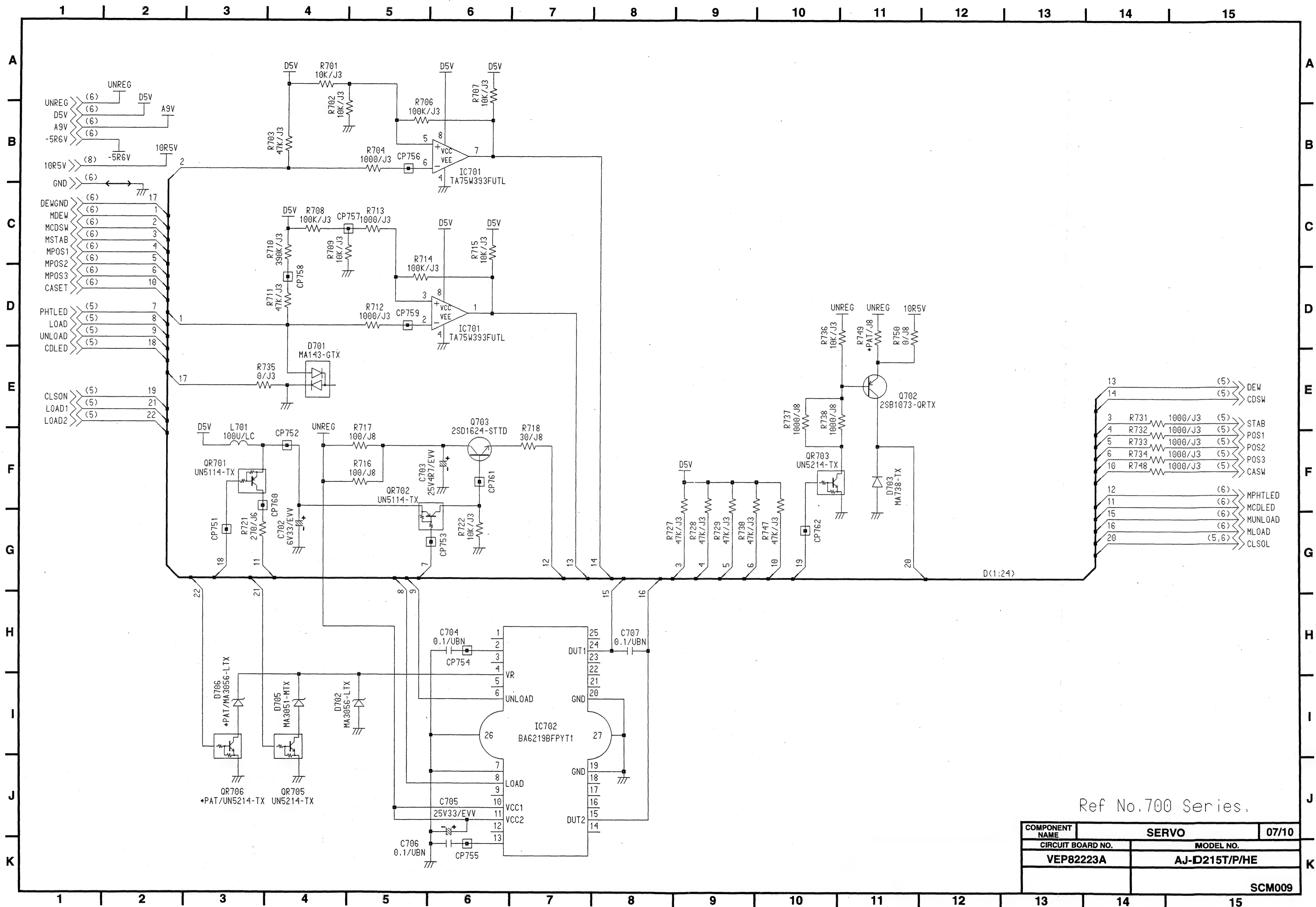




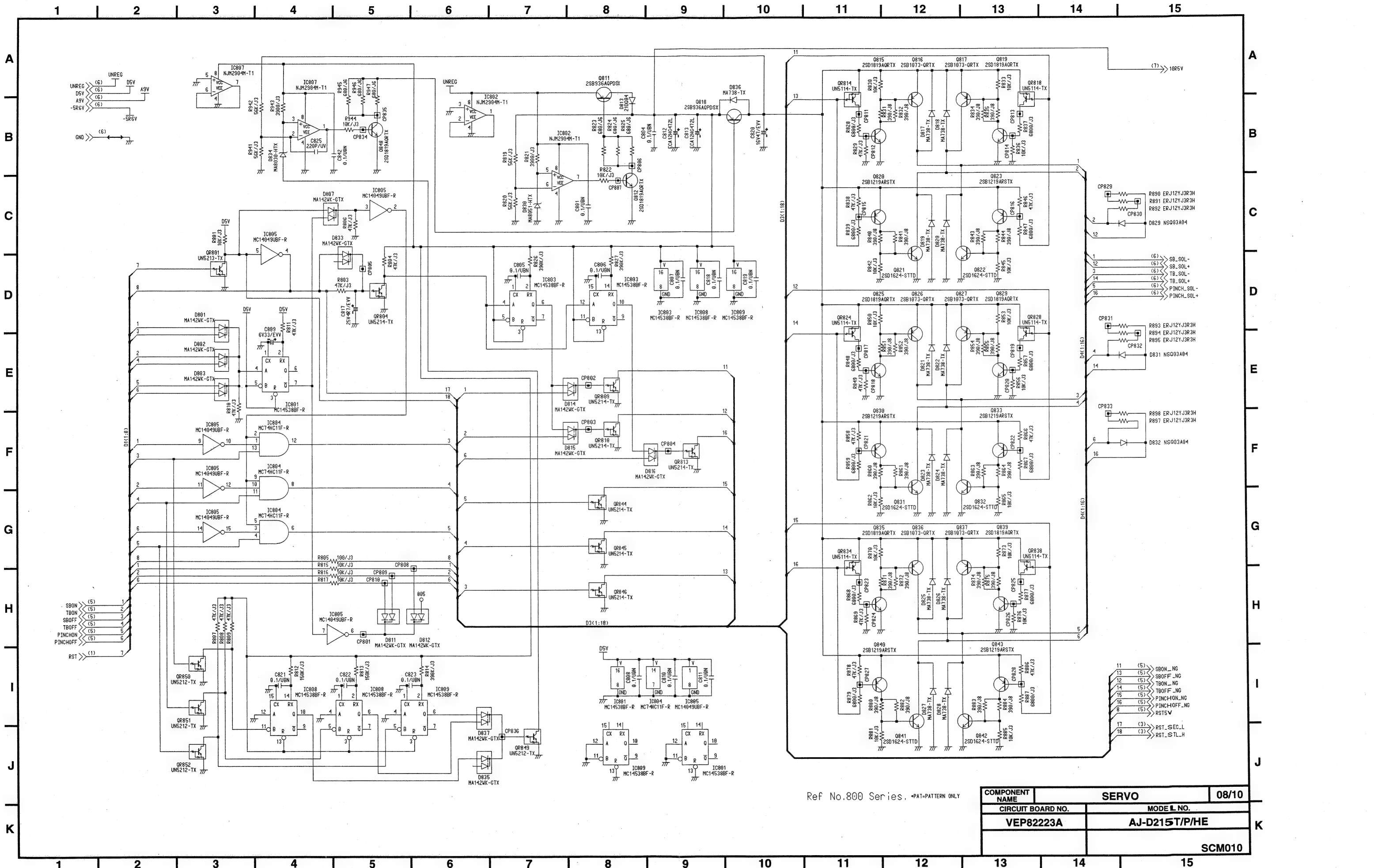
Ref No.500 Series. \*PAT=PATTERN ONLY

COMPONENT NAME	SERVO	05/10
CIRCUIT BOARD NO.	MODEL NO.	
VEP82223A	AJ-D215T/P/HE	
	SCM007	



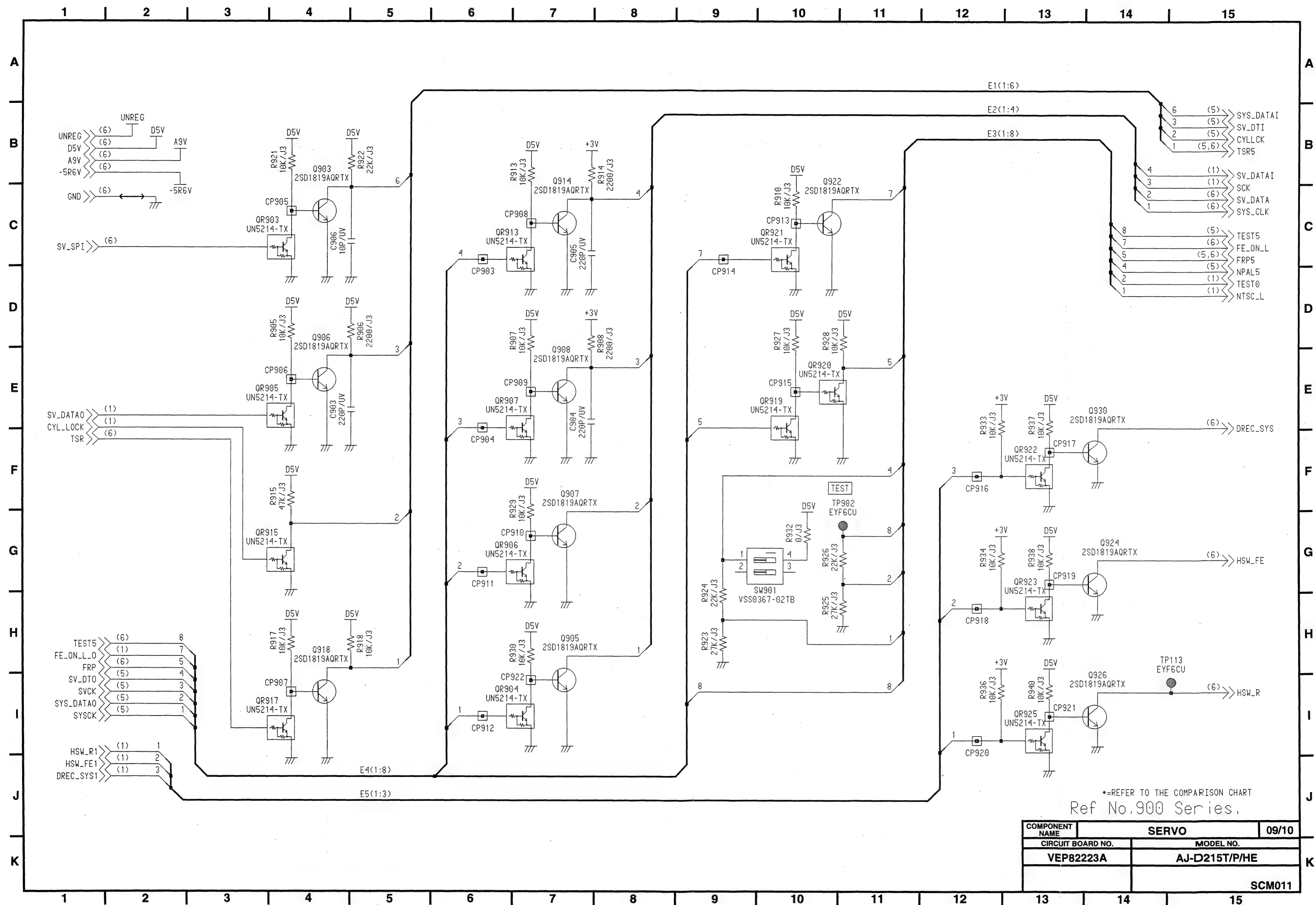




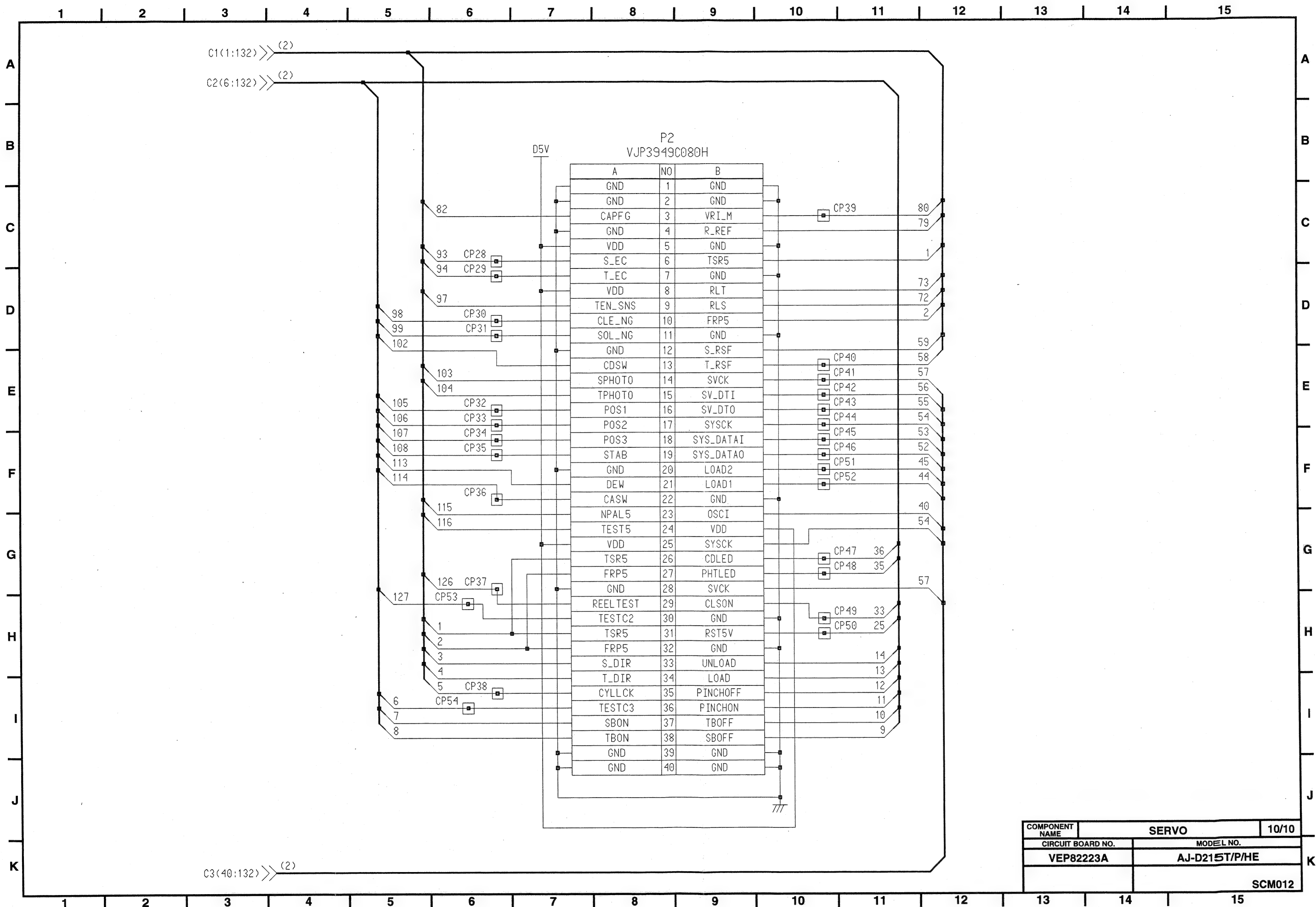


Ref No.800 Series. \*PAT-PATTERN ONLY

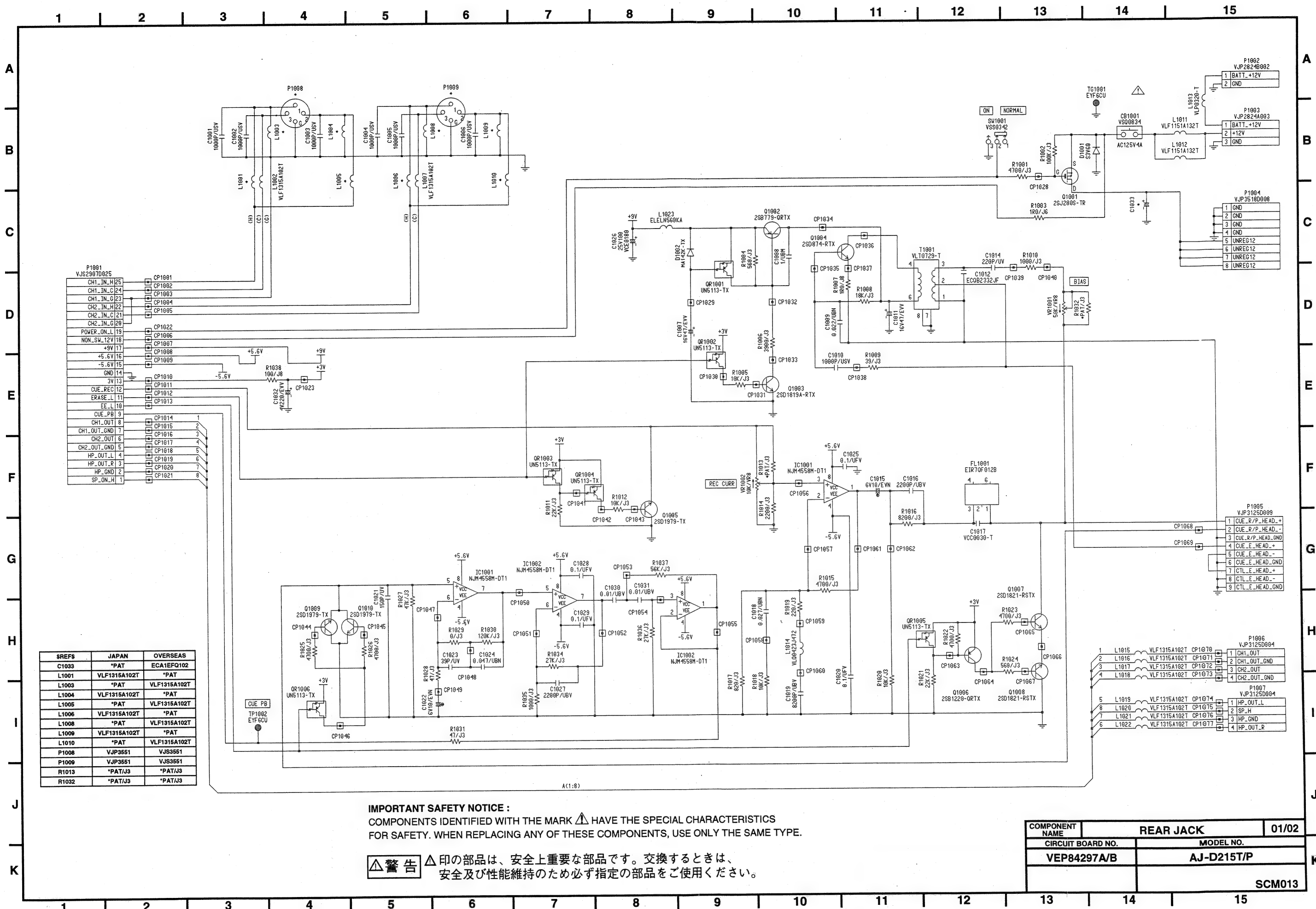
COMPONENT NAME		SERVO	08/10
CIRCUIT BOARD NO.		MODE L NO.	
VEP8223A		AJ-D215T/P/HE	
		SCM010	








COMPONENT NAME	SERVO	10/10
CIRCUIT BOARD NO.	MODEL NO.	
VEP82223A	AJ-D215T/P/HE	
	SCM012	

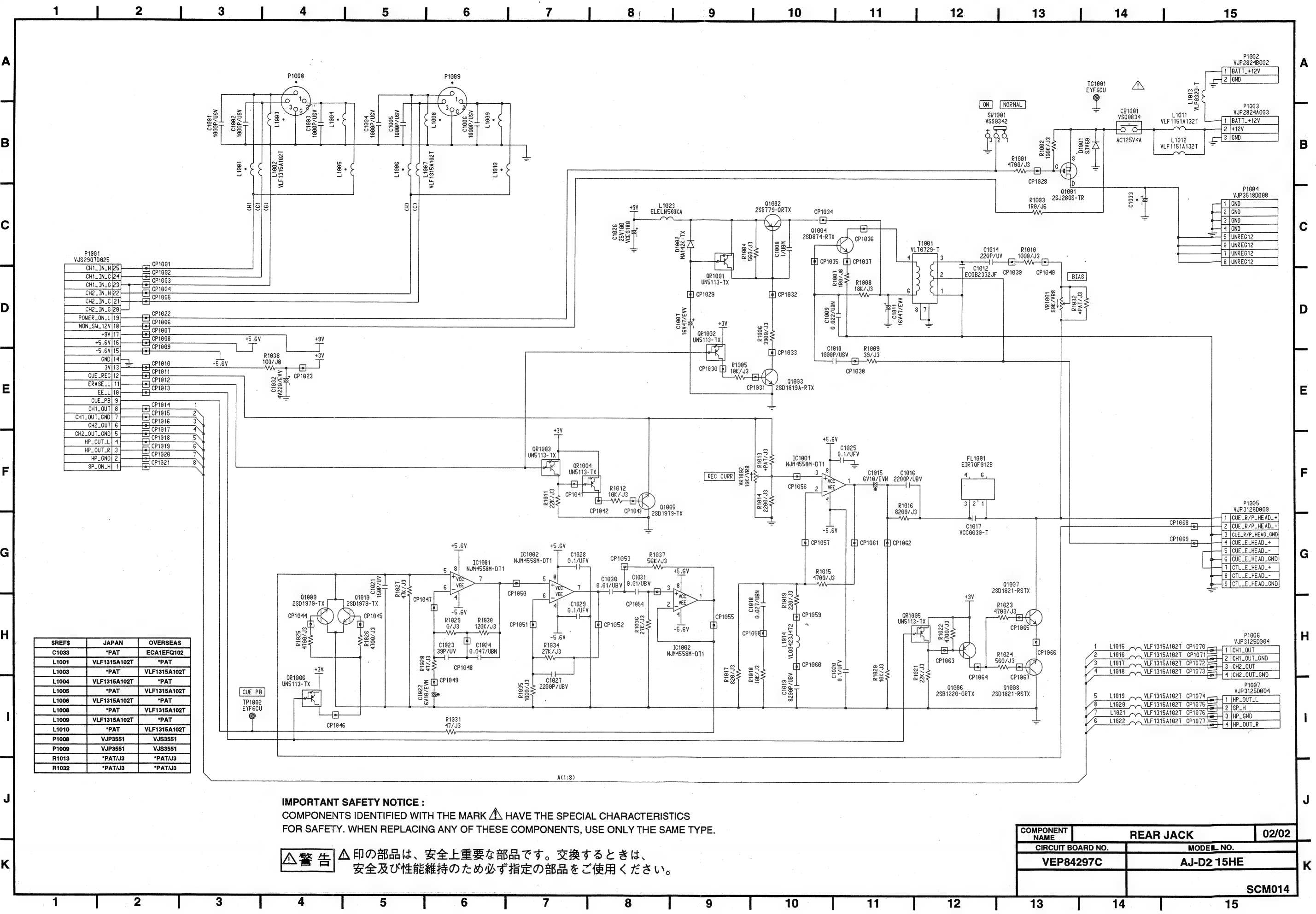


\$REF\$	JAPAN	OVERSEAS
C1033	*PAT	ECA1EFQ102
L1001	VLF1315A102T	*PAT
L1003	*PAT	VLF1315A102T
L1004	VLF1315A102T	*PAT
L1005	*PAT	VLF1315A102T
L1006	VLF1315A102T	*PAT
L1008	*PAT	VLF1315A102T
L1009	VLF1315A102T	*PAT
L1010	*PAT	VLF1315A102T
P1008	VJP3551	VJS3551
P1009	VJP3551	VJS3551
R1013	*PAT/J3	*PAT/J3
R1032	*PAT/J3	*PAT/J3

**IMPORTANT SAFETY NOTICE :**  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS  
FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

 **警告** △印の部品は、安全上重要な部品です。交換するときは、  
安全及び性能維持のため必ず指定の部品をご使用ください。

COMPONENT NAME	REAR JACK	01/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP84297A/B	AJ-D215T/P	
		SCM013

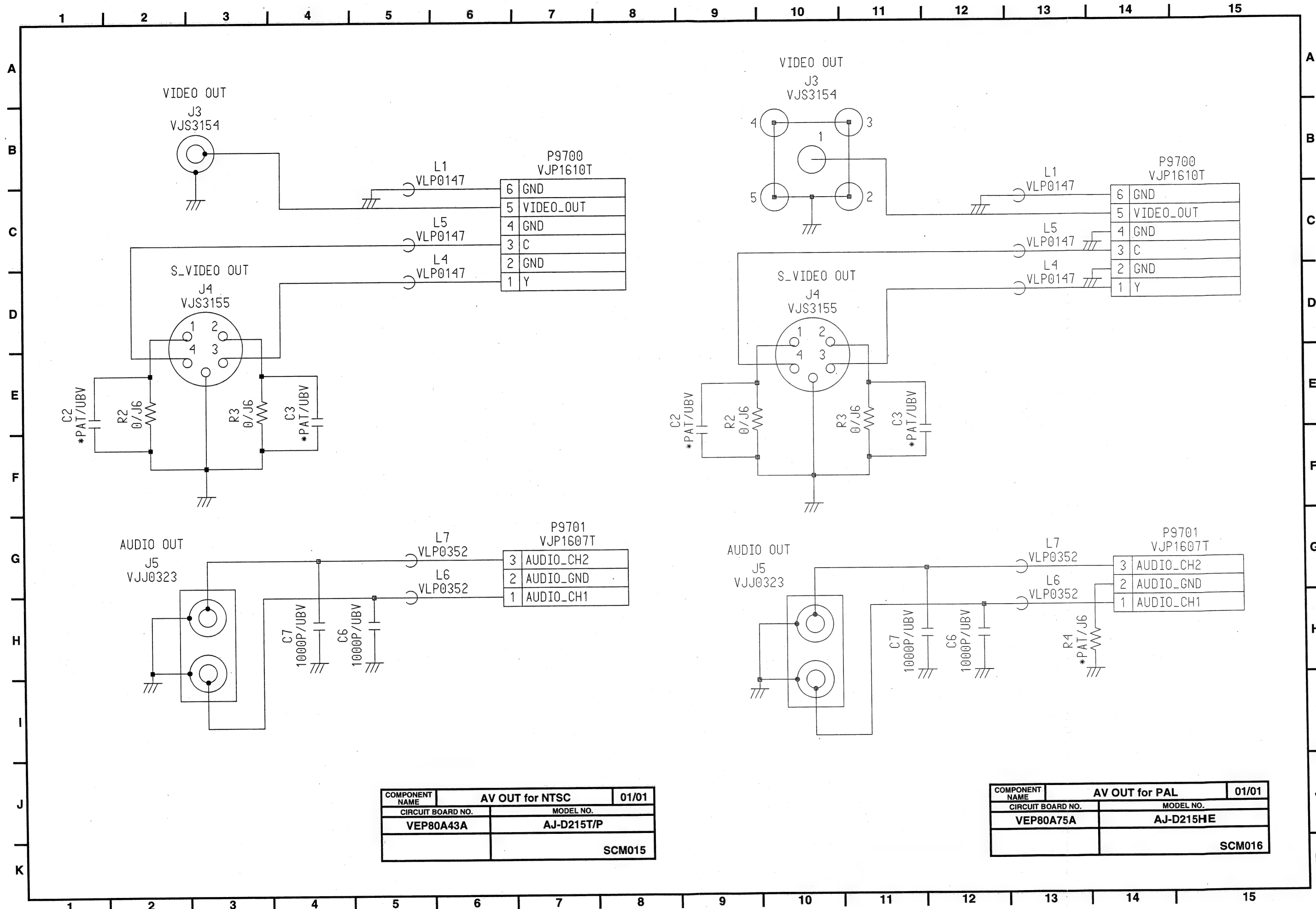


SREFS	JAPAN	OVERSEAS
C1033	*PAT	ECA1EFQ102
L1001	VLF1315A102T	*PAT
L1003	*PAT	VLF1315A102T
L1004	VLF1315A102T	*PAT
L1005	*PAT	VLF1315A102T
L1006	VLF1315A102T	*PAT
L1008	*PAT	VLF1315A102T
L1009	VLF1315A102T	*PAT
L1010	*PAT	VLF1315A102T
P1008	VJP3551	VJS3551
P1009	VJP3551	VJS3551
R1013	*PAT/J3	*PAT/J3
R1032	*PAT/J3	*PAT/J3

**IMPORTANT SAFETY NOTICE :**  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

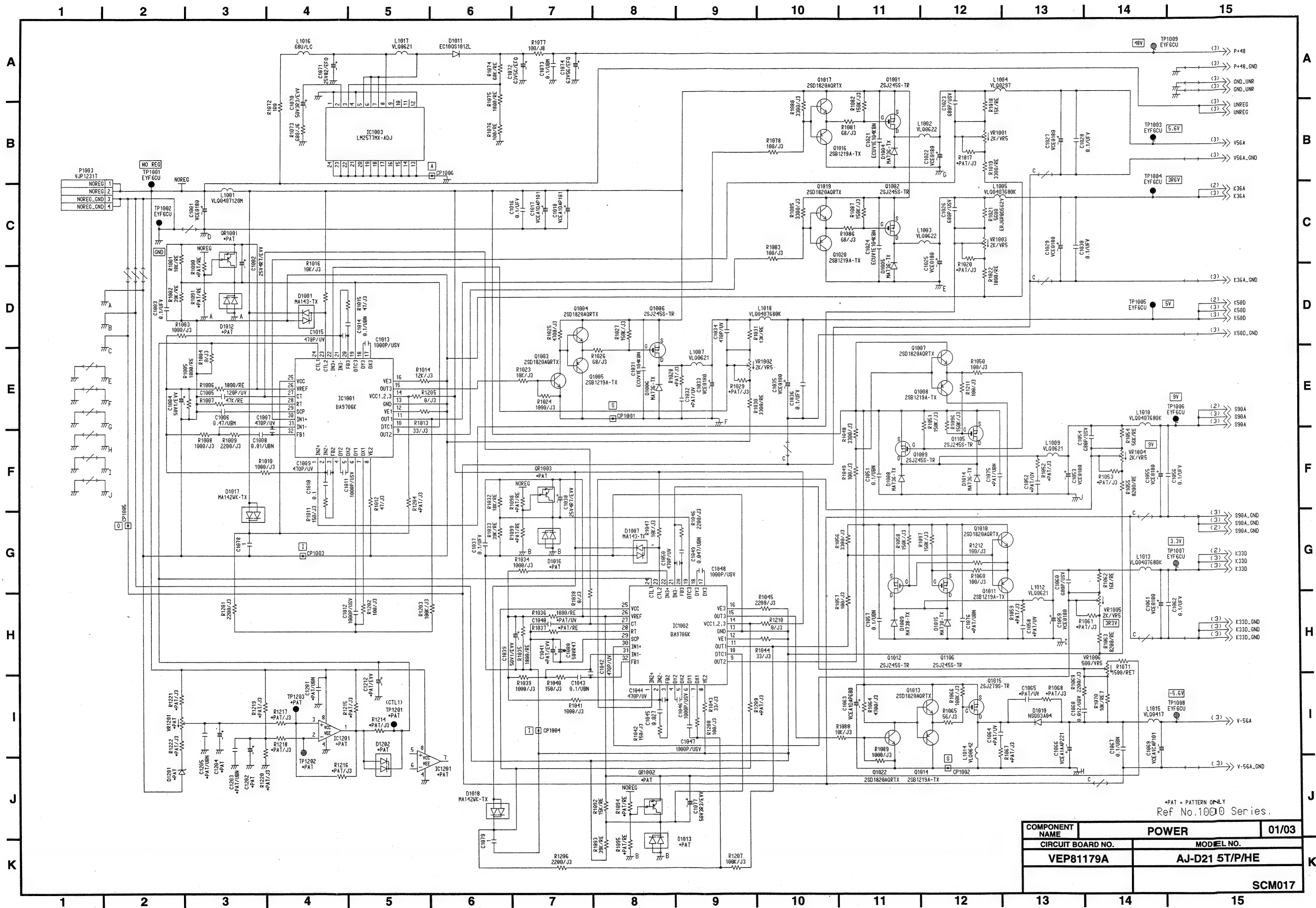
**警告** △印の部品は、安全上重要な部品です。交換するときは、安全及び性能維持のため必ず指定の部品をご使用ください。

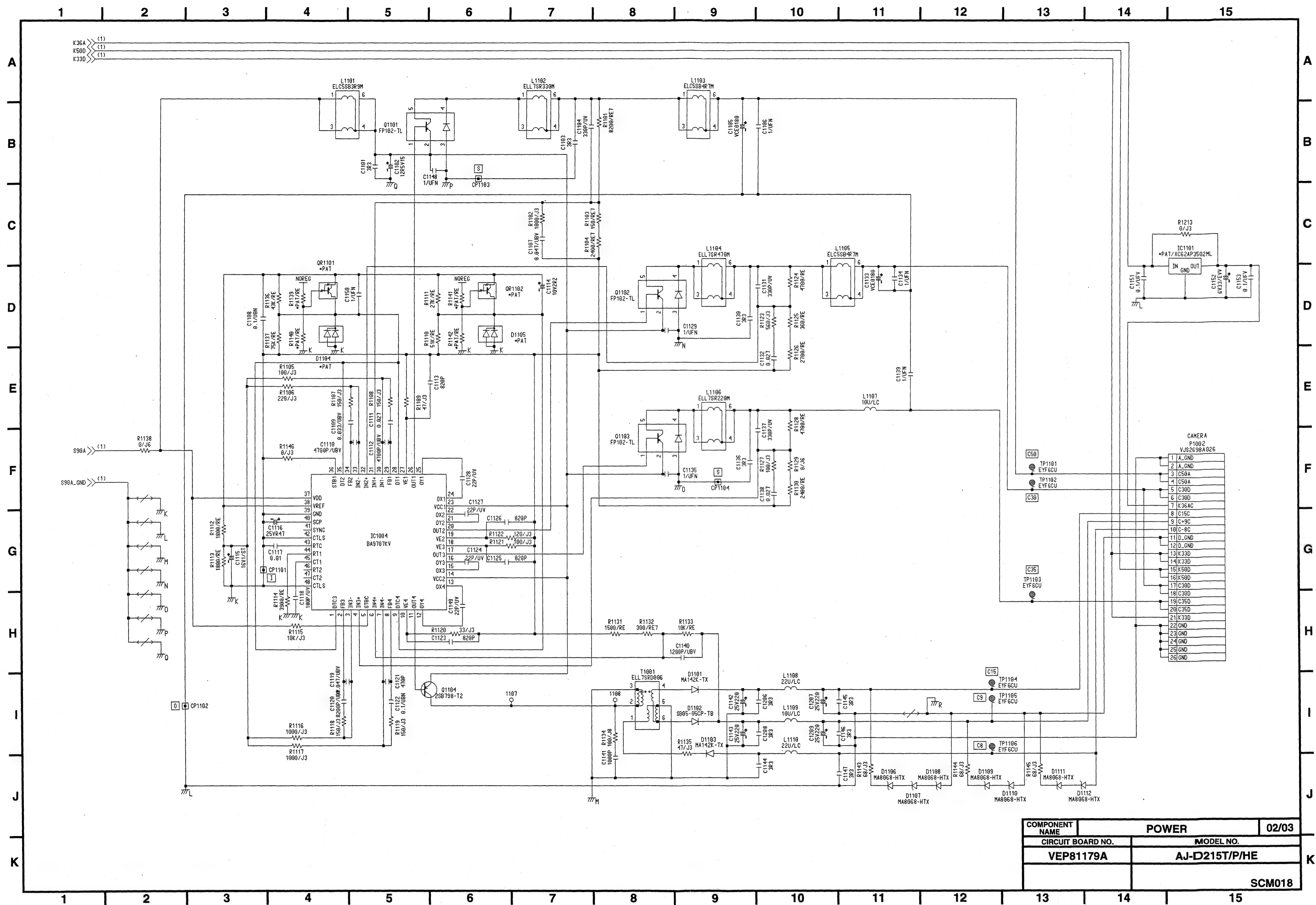
COMPONENT NAME	REAR JACK	02/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP84297C	AJ-D2 15HE	
		SCM014



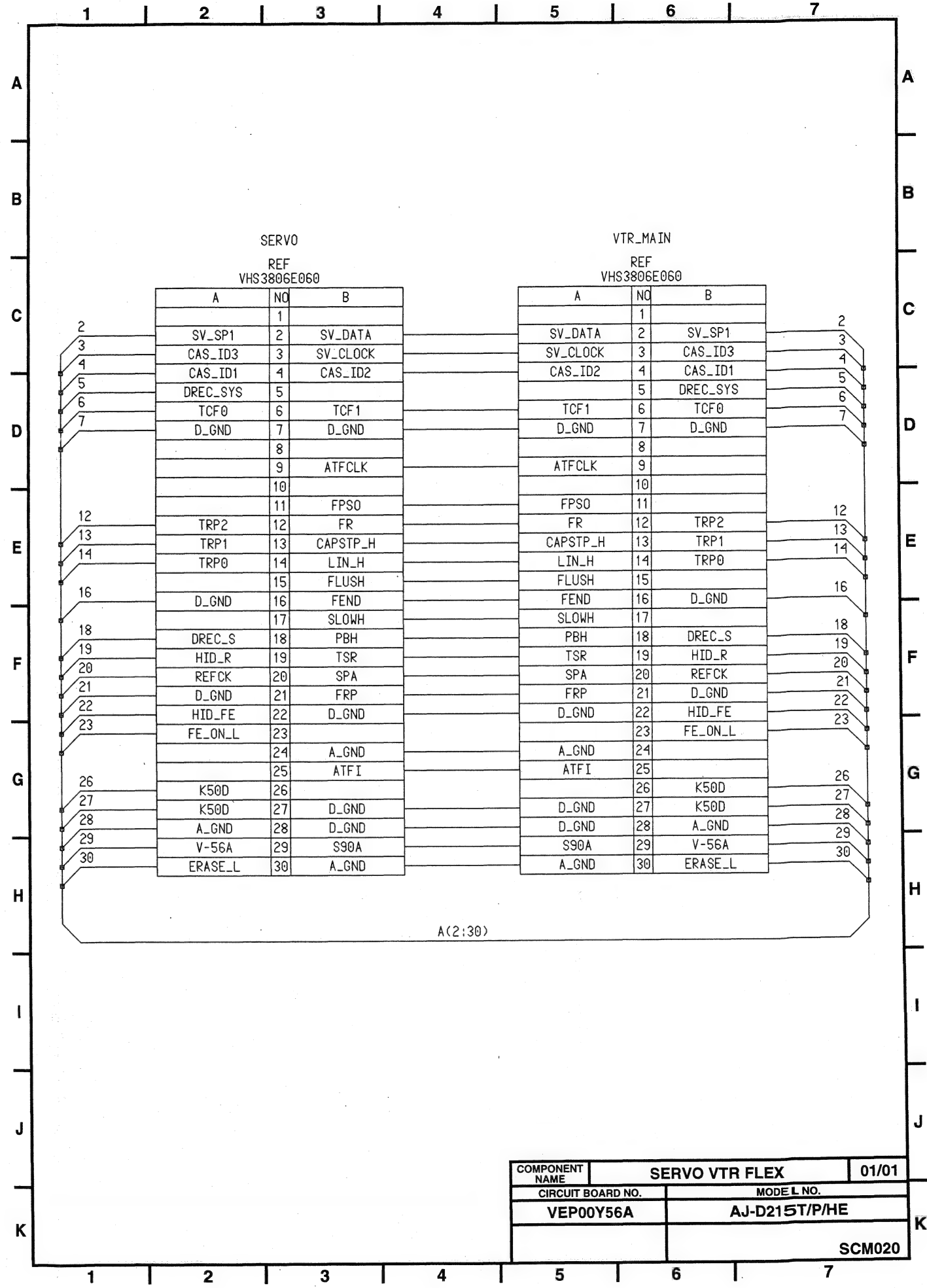
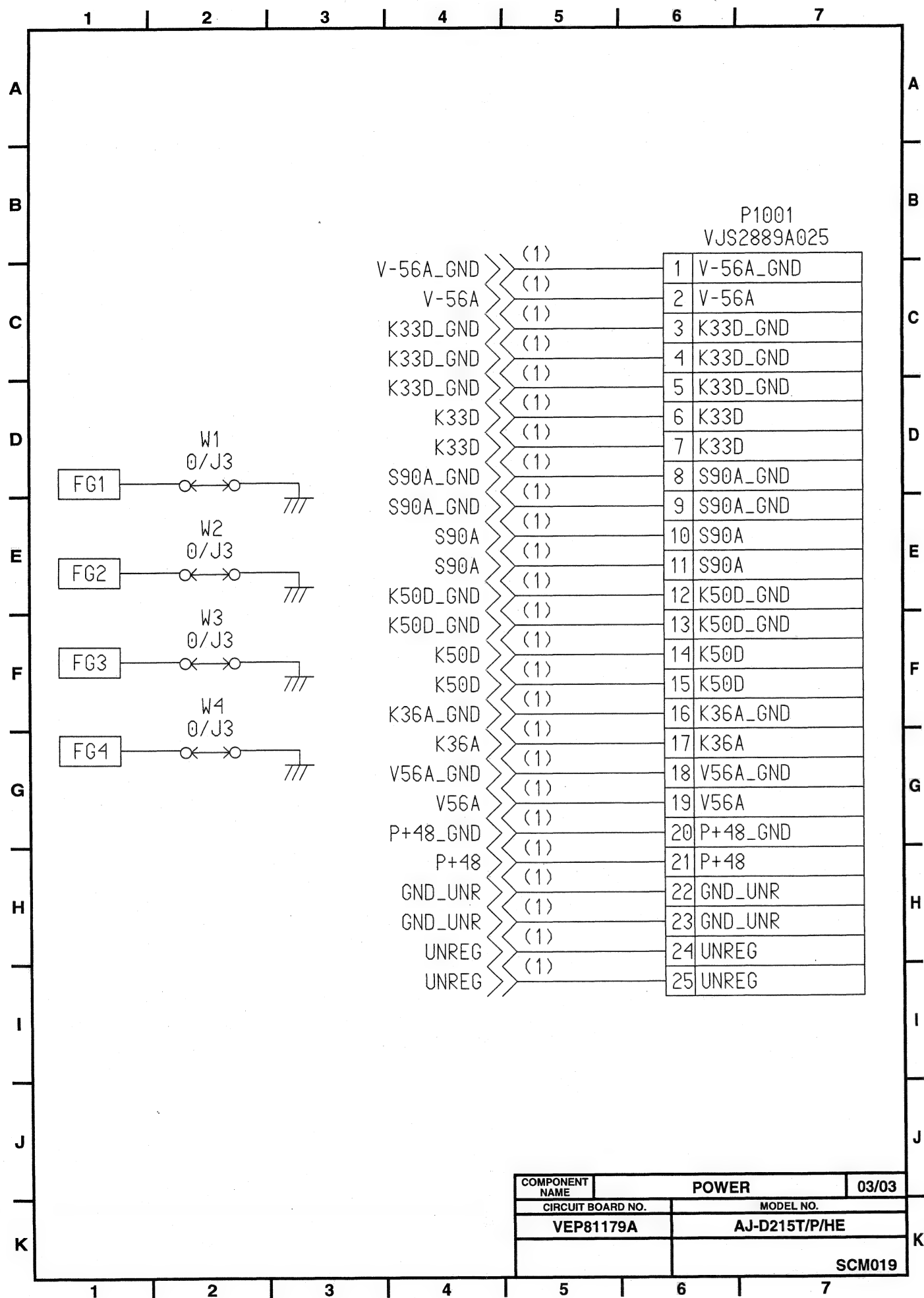
COMPONENT NAME	AV OUT for NTSC	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A43A	AJ-D215T/P	
	SCM015	

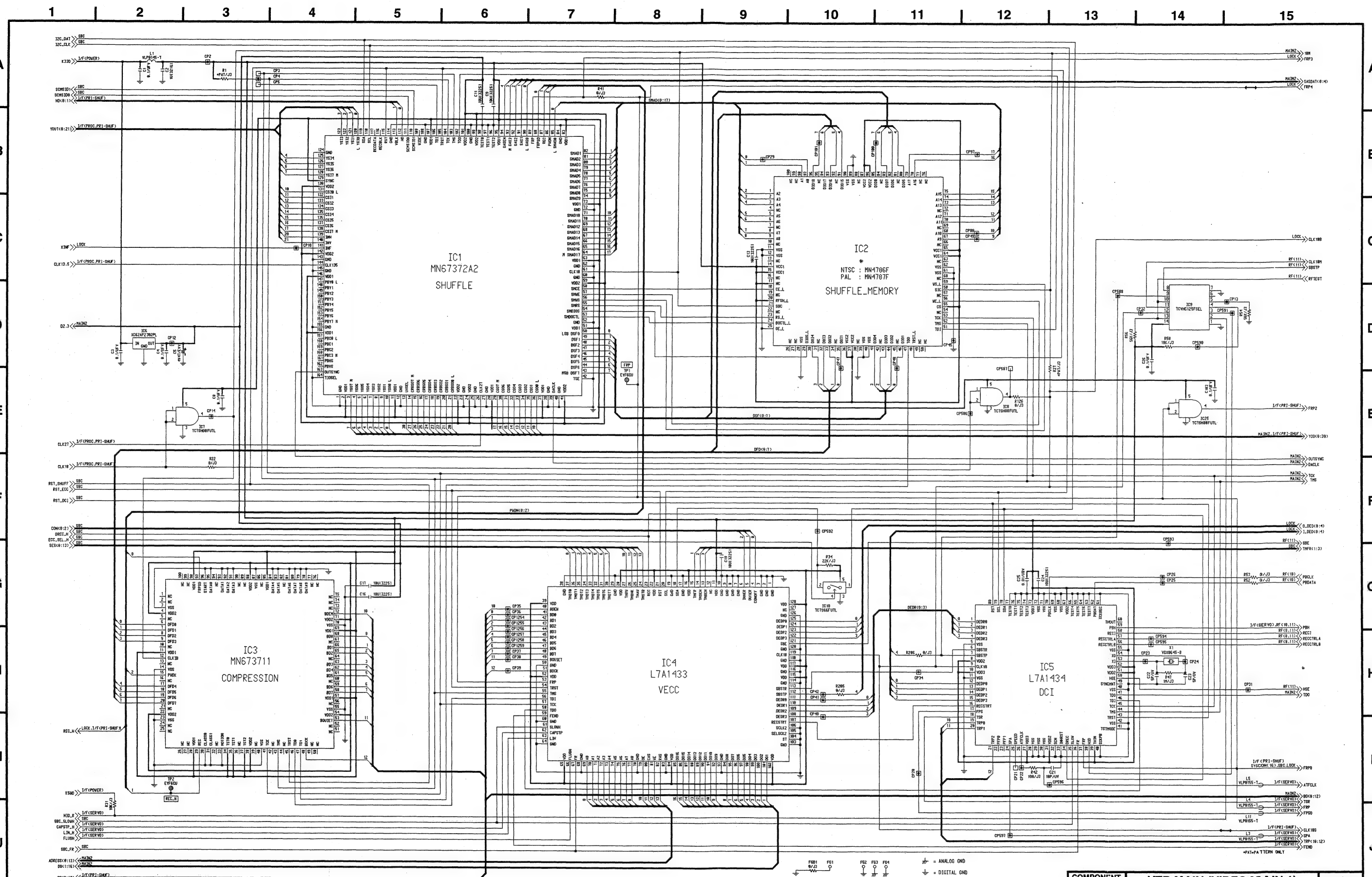
COMPONENT NAME	AV OUT for PAL	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A75A	AJ-D215HE	
	SCM016	





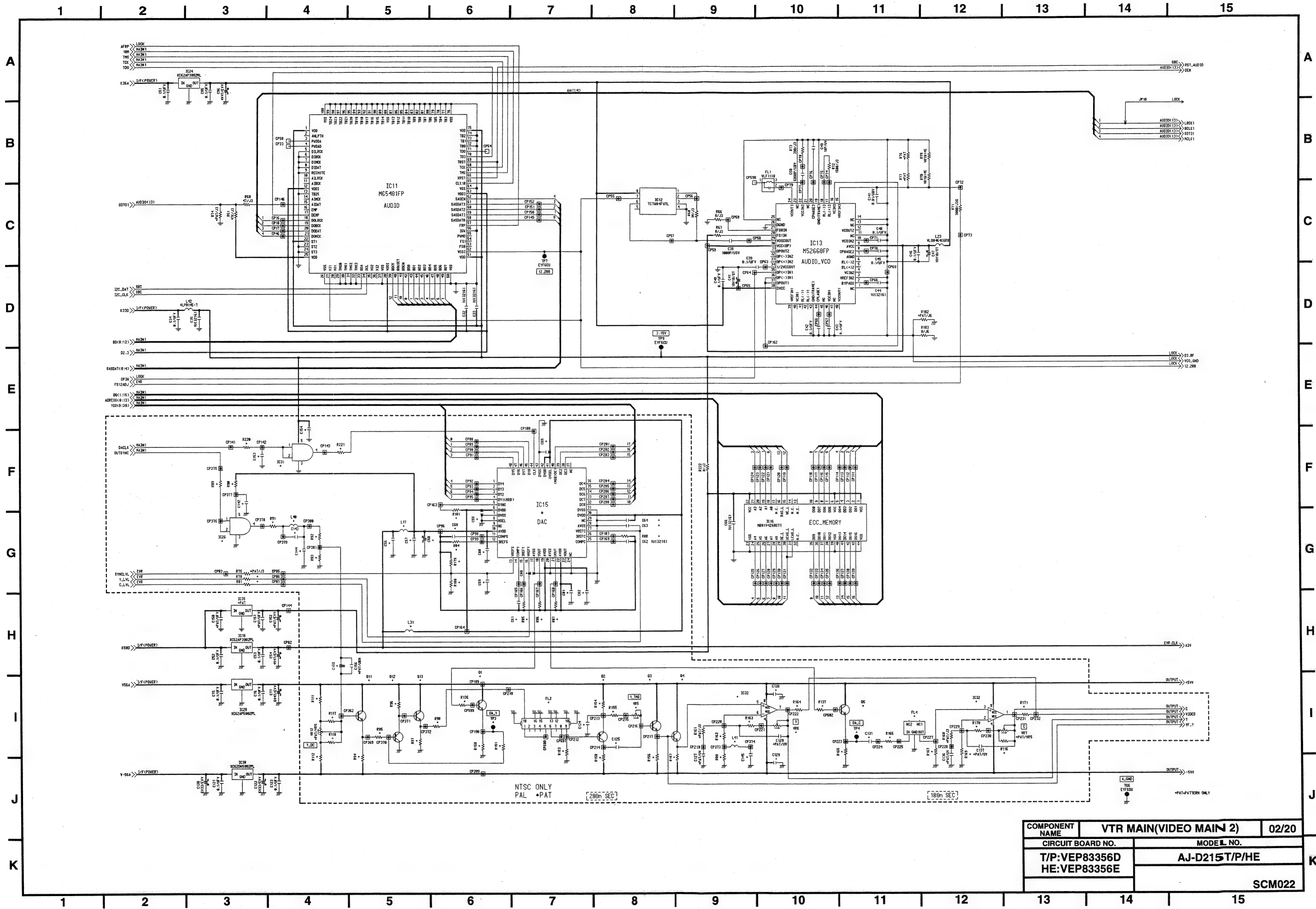




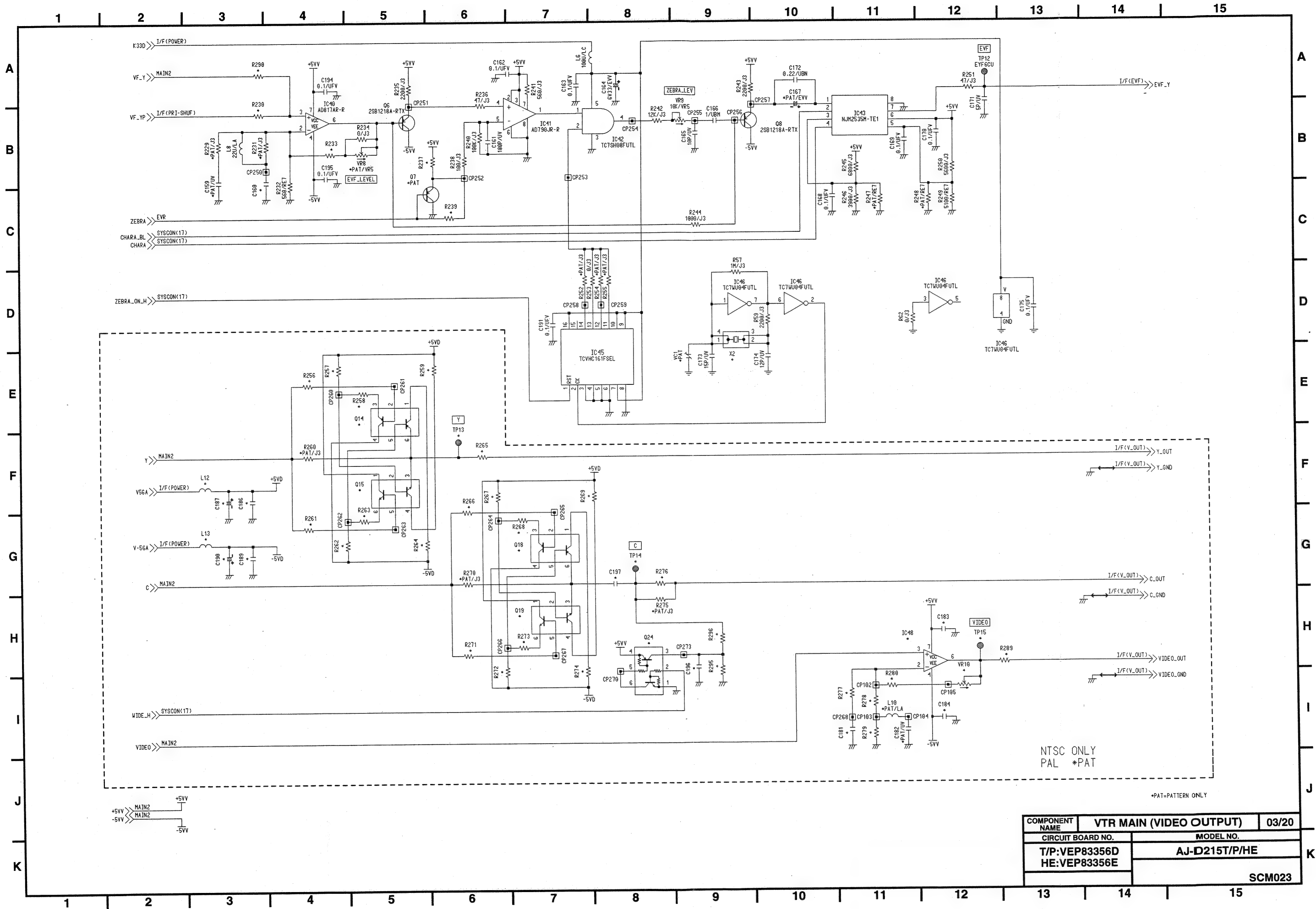


COMPONENT NAME	VTR MAIN (VIDEO MAIN 1)	01/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D	AJ-D215T/P/HE	
HE:VEP83356E		
SCM021		

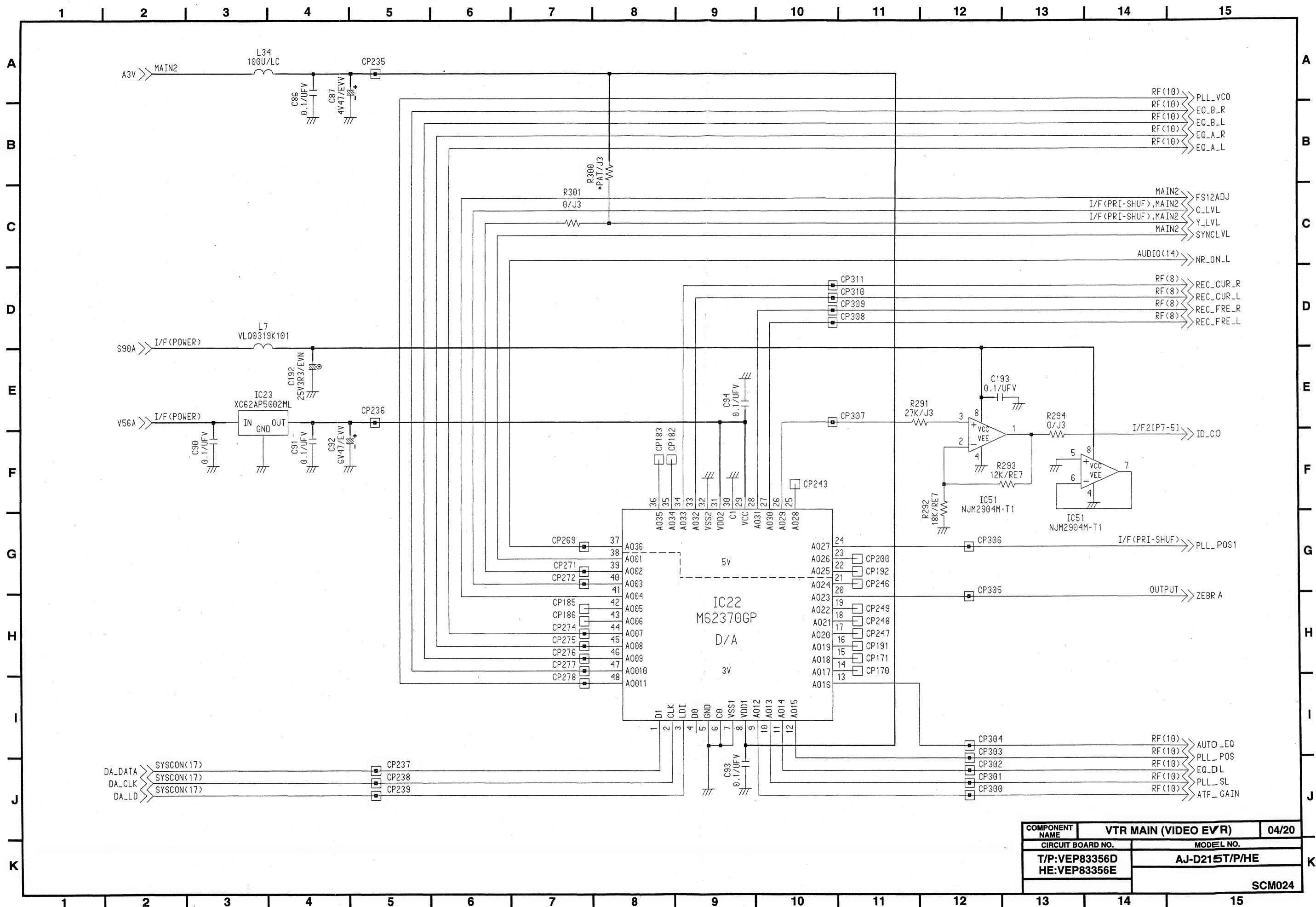


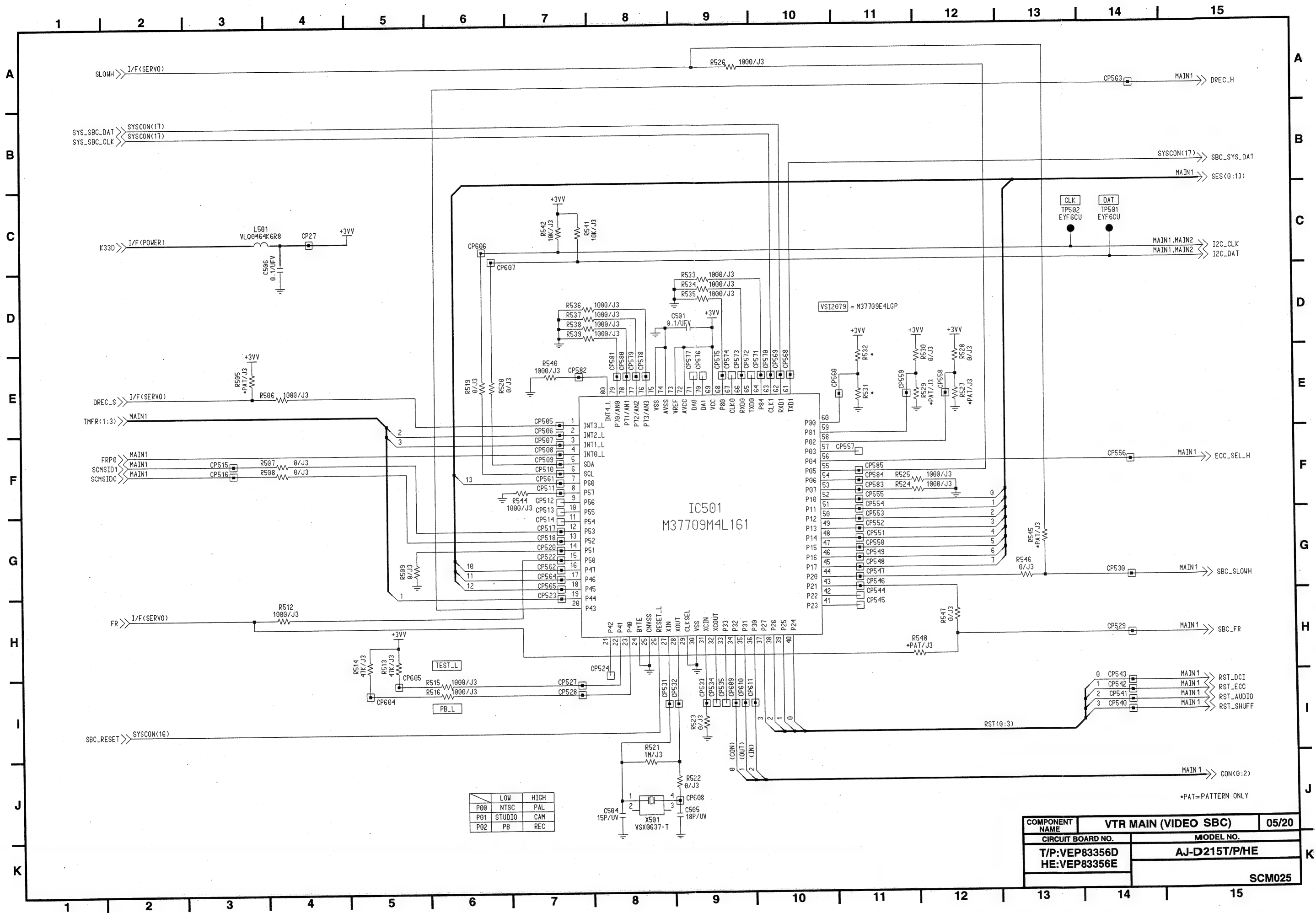


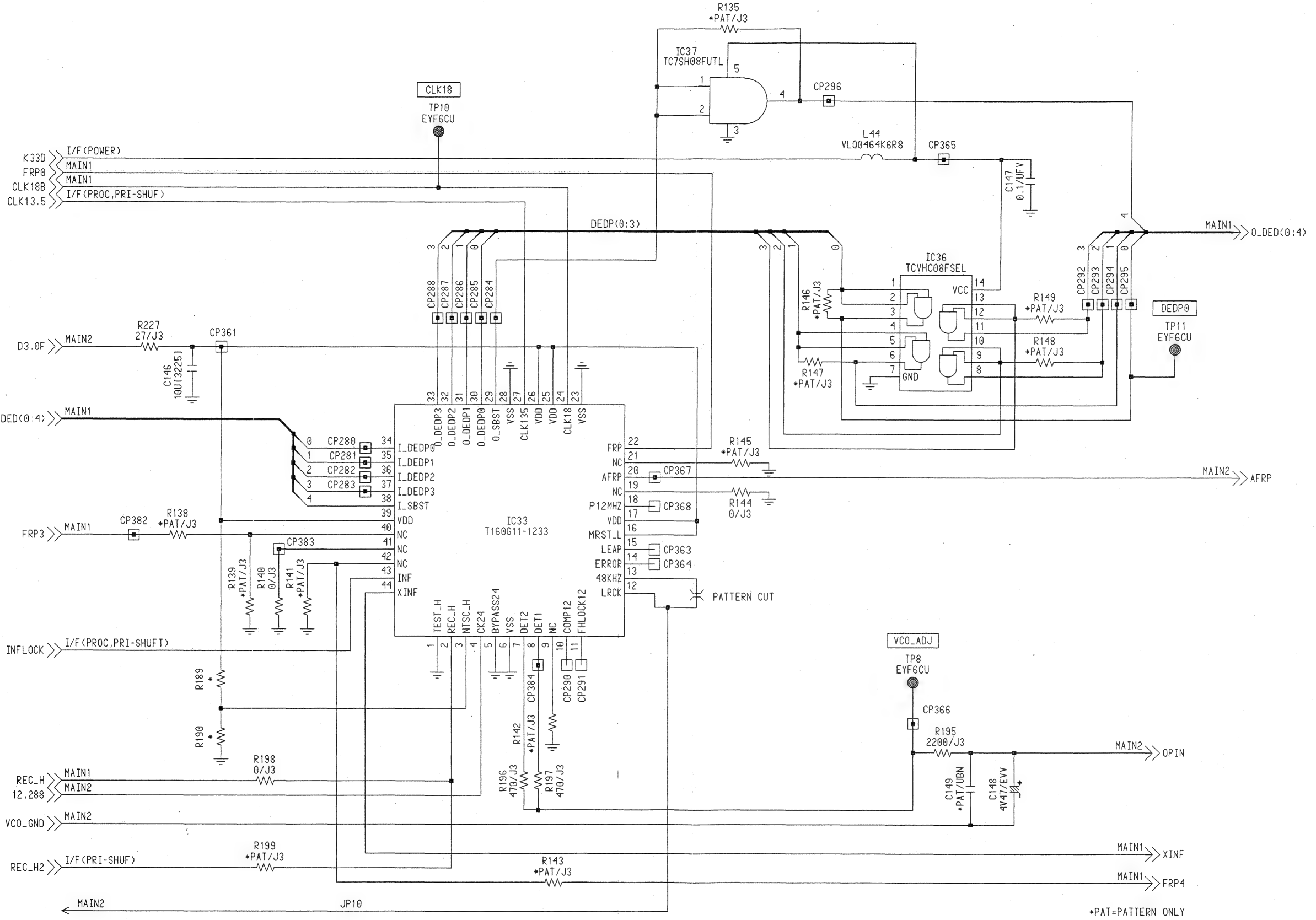
COMPONENT NAME	VTR MAIN(VIDEO MAIN 2)	02/20
CIRCUIT BOARD NO.	MODE L NO.	
T/P: VEP83356D	AJ-D215T/P/HE	
HE: VEP83356E		
SCM022		



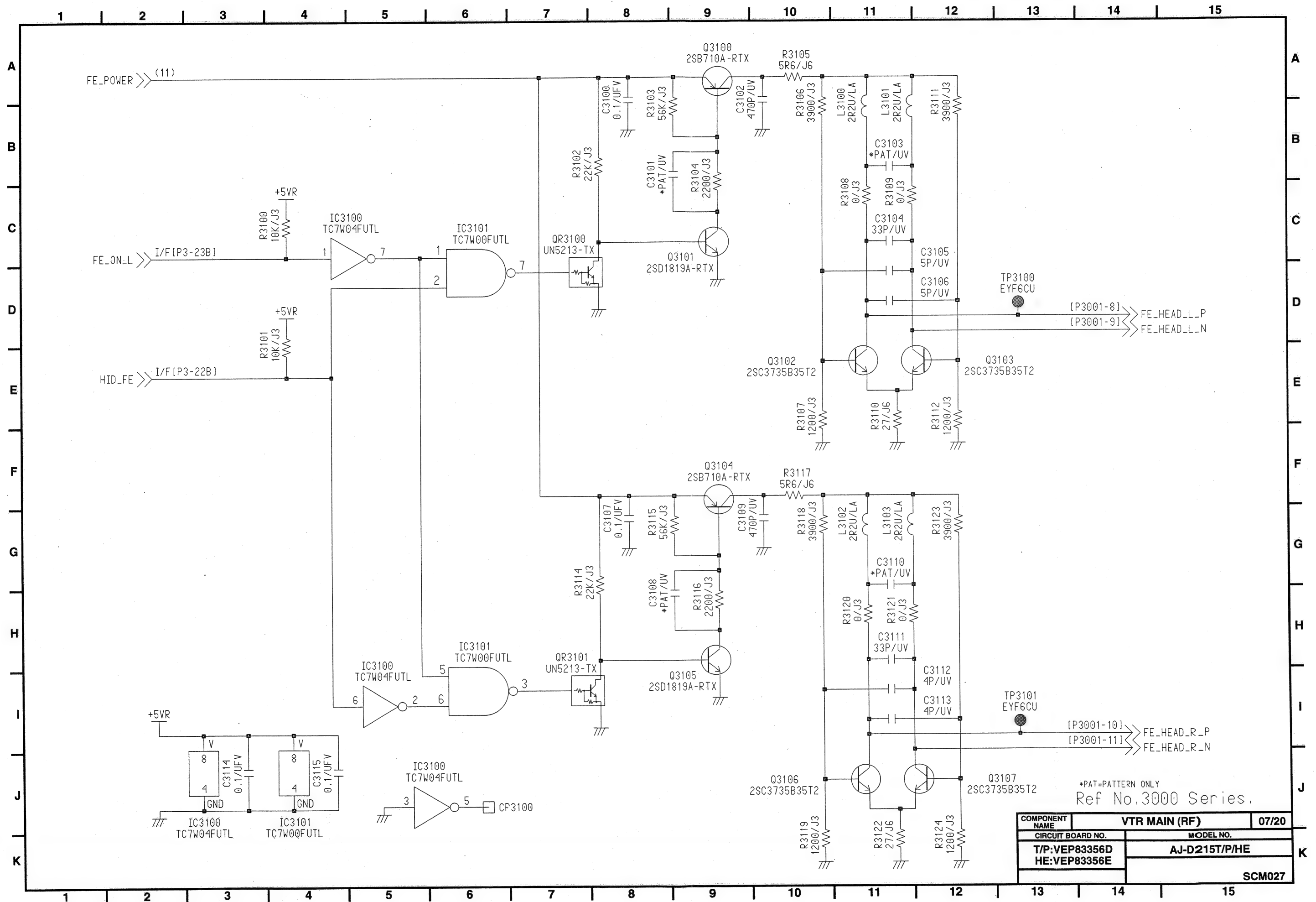
COMPONENT NAME	VTR MAIN (VIDEO OUTPUT)	03/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D	AJ-D215T/P/HE	
HE:VEP83356E		
	SCM023	

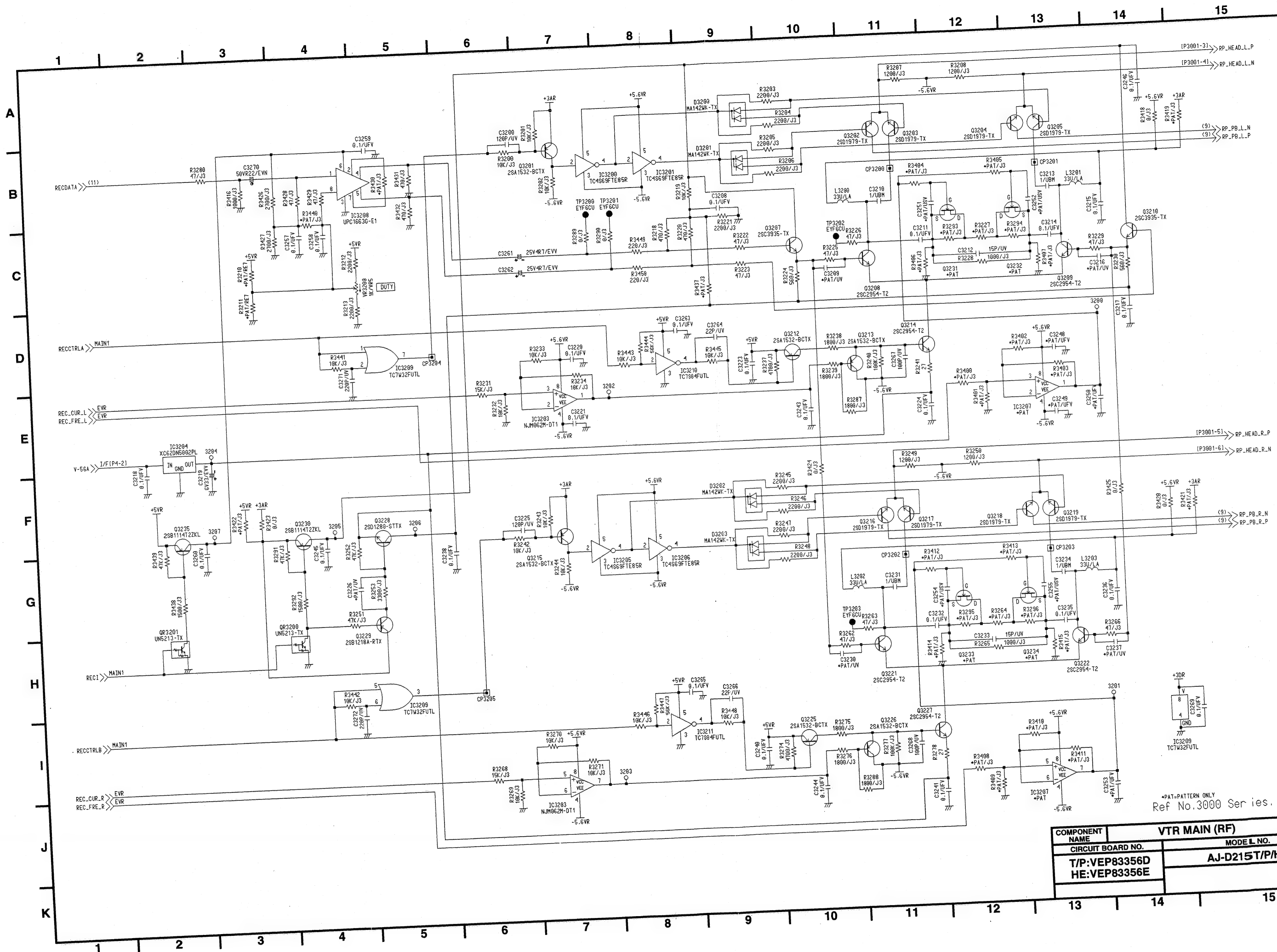






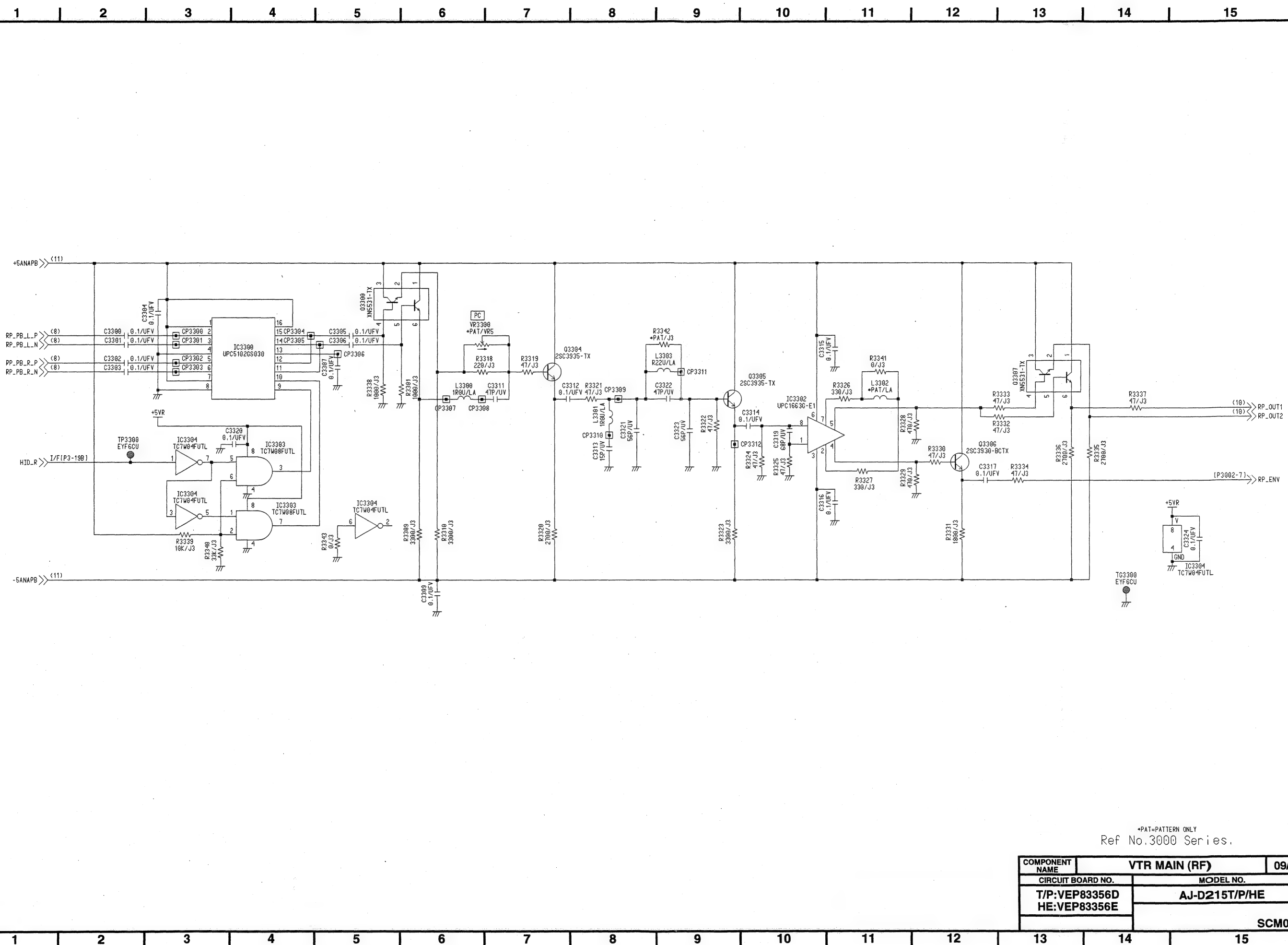
COMPONENT NAME	VTR MAIN (VIDEO LOCK)	06/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D	AJ-D215T/P/HE	
HE:VEP83356E		
	SCM026	





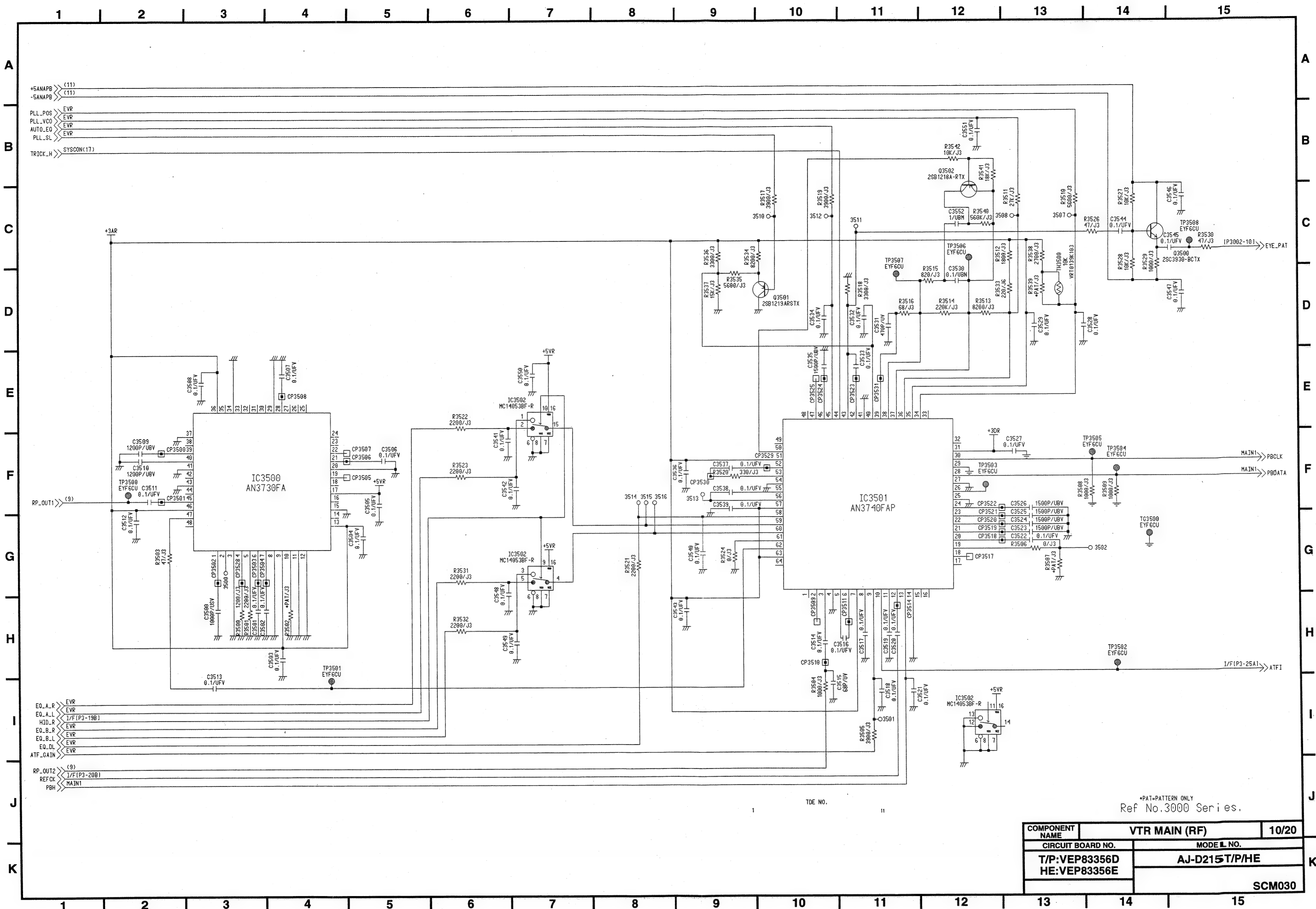
COMPONENT NAME		VTR MAIN (RF)	08/20
CIRCUIT BOARD NO.		MODEL NO.	
T/P:VEP83356D		AJ-D215T/P/HE	
HE:VEP83356E		SCM028	



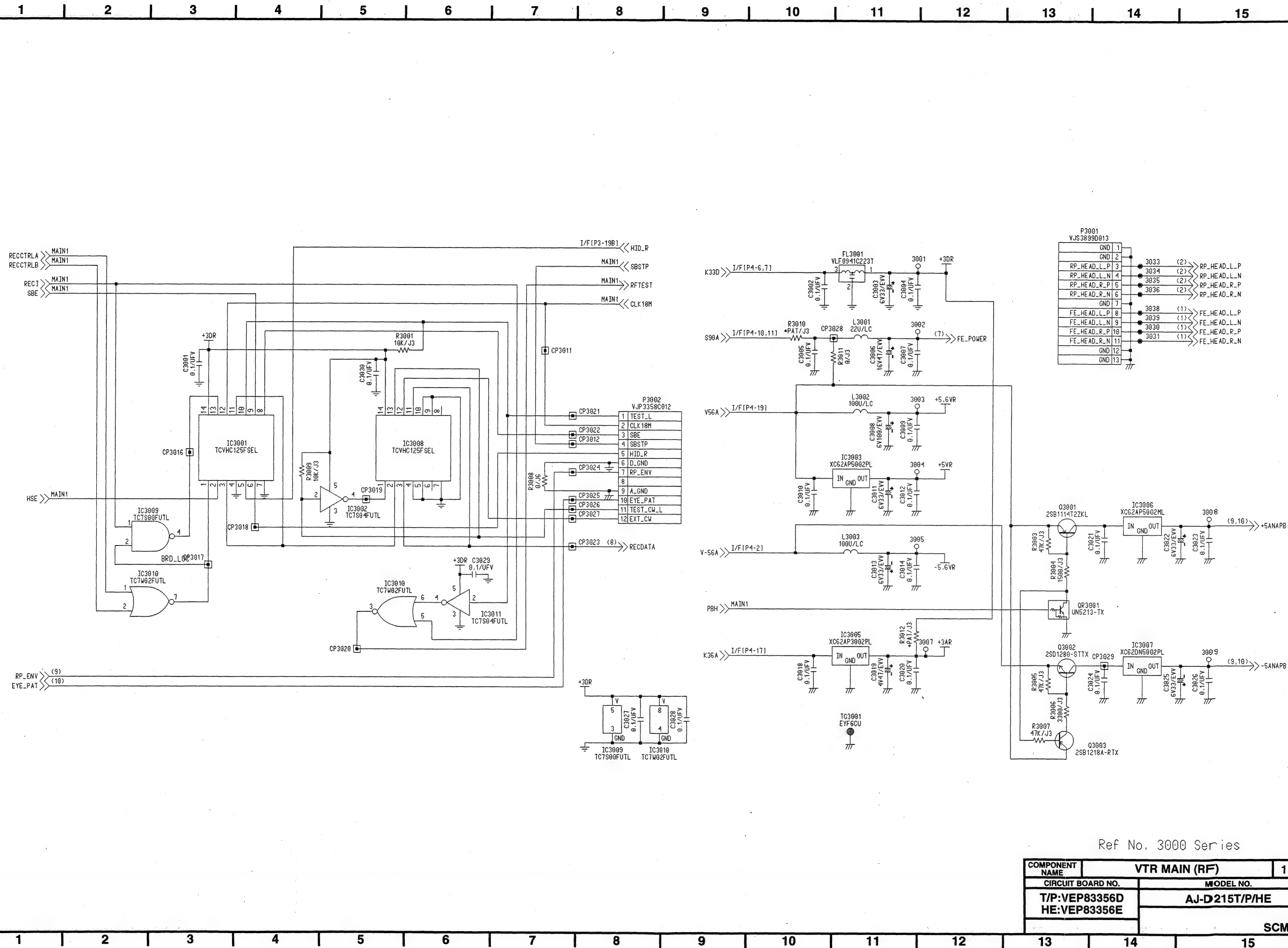


COMPONENT NAME	VTR MAIN (RF)	09/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P: VEP83356D HE: VEP83356E	AJ-D215T/P/HE	
	SCM029	





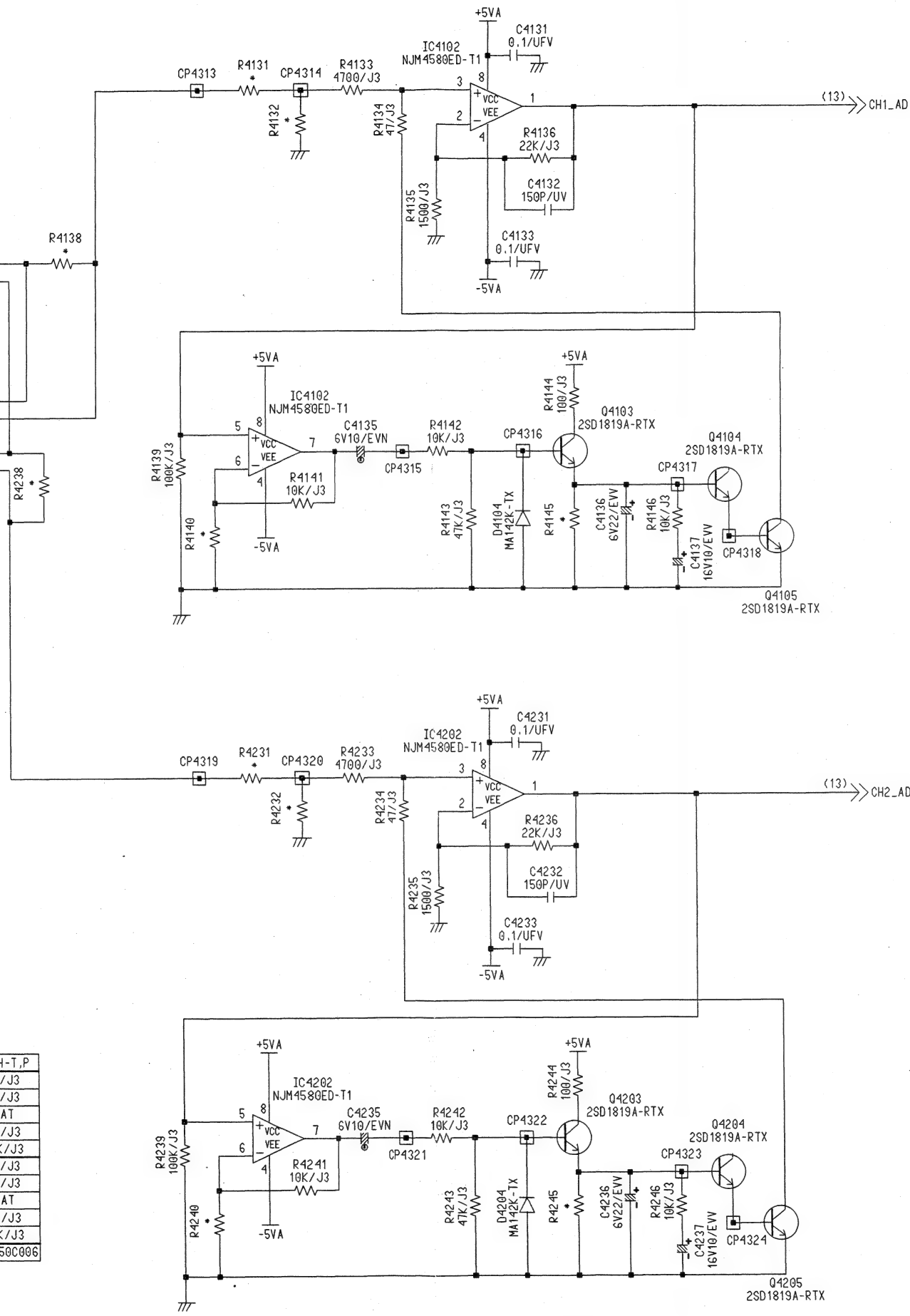
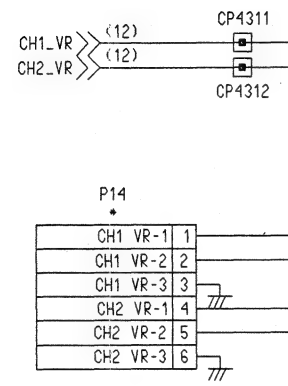
COMPONENT NAME		VTR MAIN (RF)	10/20
CIRCUIT BOARD NO.		MODE L NO.	
T/P:VEP83356D		AJ-D215T/P/HE	
HE:VEP83356E		SCM030	



Ref No. 3000 Series

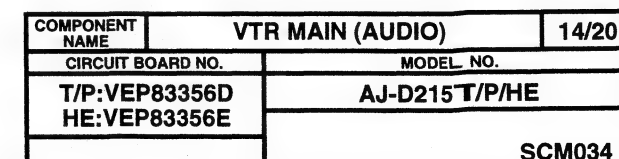
COMPONENT NAME	VTR MAIN (RF)	11/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D HE:VEP83356E	AJ-D215T/P/HE	
	SCM031	

	D223-T,P	D223H-E	D223H-T,P
R4131	8200/J3	8200/J3	15K/J3
R4132	2700/J3	10K/J3	10K/J3
R4138	0/J3	*PAT	*PAT
R4140	2700/J3	22K/J3	22K/J3
R4145	1R5M/J3	100K/J3	100K/J3
R4231	8200/J3	8200/J3	15K/J3
R4232	2700/J3	10K/J3	10K/J3
R4238	0/J3	*PAT	*PAT
R4240	2700/J3	22K/J3	22K/J3
R4245	1R5M/J3	100K/J3	100K/J3
P14	*PAT	VJP3950C006	VJP3950C006

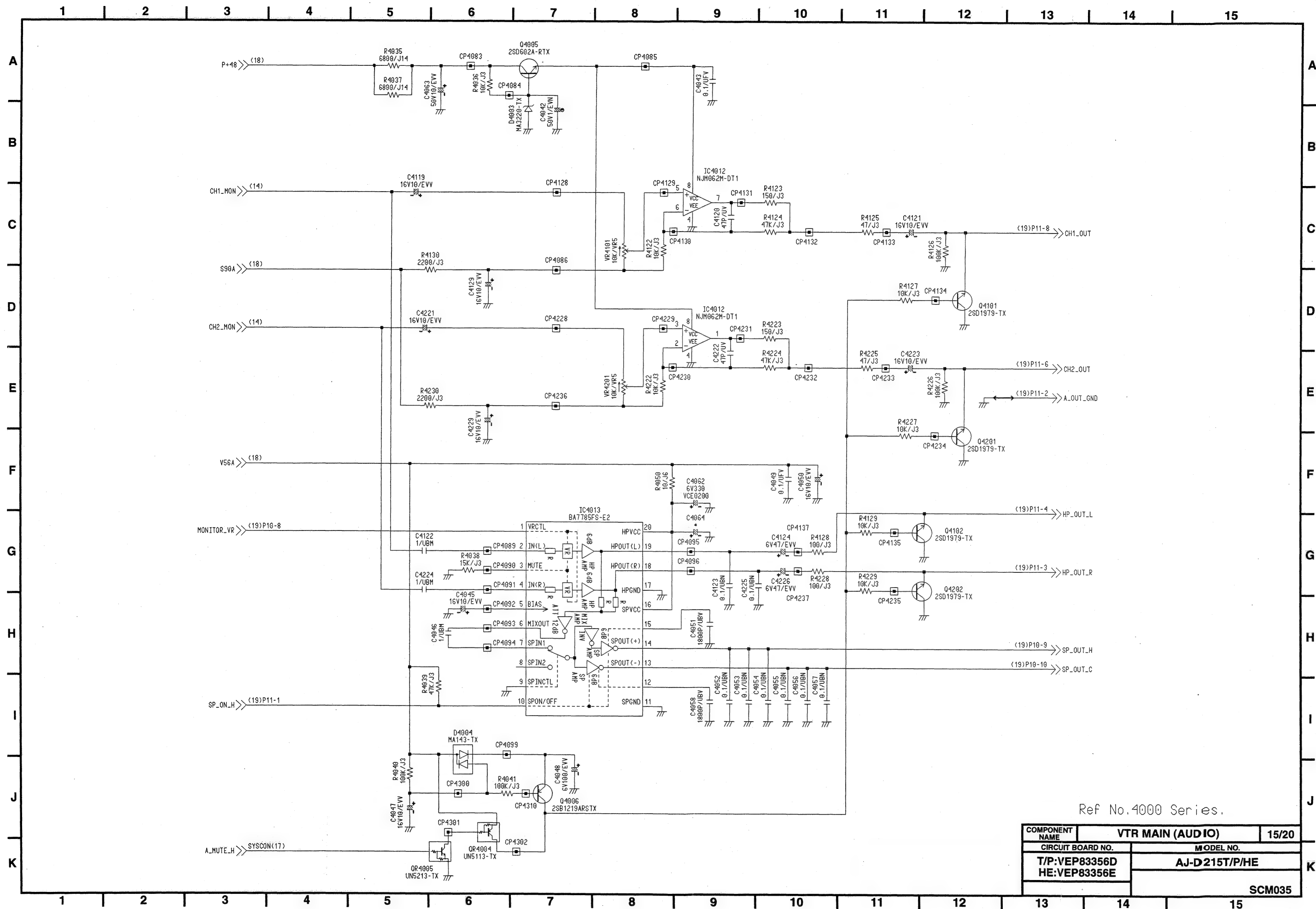


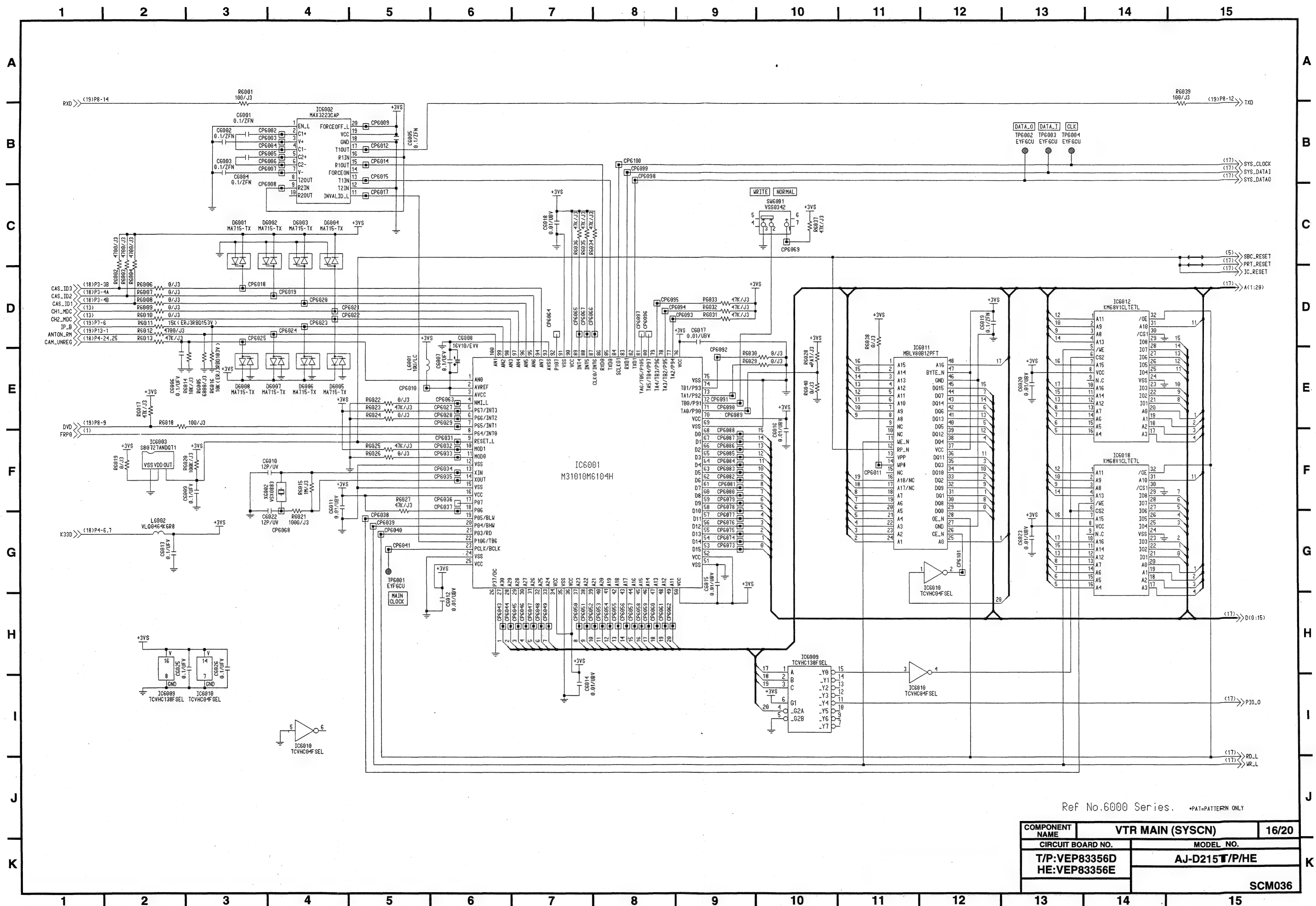
COMPONENT NAME	VTR MAIN (AUDIO AGC)	12/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D	AJ-D215 T/P/HE	
HE:VEP83356E		
	SCM032	





COMPONENT NAME	VTR MAIN (AUDIO)	14/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P: VEP83356D	AJ-D215 T/P/HE	
HE: VEP83356E		
		SCM034





COMPONENT NAME	VTR MAIN (SYSCN)	16/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D HE:VEP83356E	AJ-D215T/P/HE	
	SCM036	

# SECTION 7

## CIRCUIT BOARD DIAGRAMS

### CONTENS

REAR JACK P. C. BOARD .....	CBA-1
SERVO P. C. BOARD .....	CBA-2
1394 & PRE-SHUFFLE P. C. BOARD (AJ-D215HE OMLY) .....	CBA-4
VTR MAIN P. C. BOARD .....	CBA-6
S SIDE P. C. BOARD .....	CBA-8
MODE CHE CK P. C. BOARD .....	CBA-8
FLEX RING P. C. BOARD .....	CBA-8
MONITOR VR P. C. BOARD .....	CBA-8
BACK UP BATTERY P. C. BOARD .....	CBA-8
TOGGLE SW P. C. BOARD .....	CBA-8
POWER P. C. BOARD .....	CBA-11
FRONT P. C. BOARD .....	CBA-11
H DEF P. C. BOARD .....	CBA-11
V DEF P. C. BOARD .....	CBA-11
CN P. C. BOARD .....	CBA-11
OPERATE P. C. BOARD .....	CBA-12
CRT MASK P. C. BOARD .....	CBA-12
ATW SENSOR P. C. BOARD .....	CBA-12
DVC PRO TERMINAL P. C. BOARD (AJ-D215HE ONLY) .....	CBA-12
TEST PLUG P. C. BOARD .....	CBA-13
AV OUT P. C. BOARD (FOR PAL) .....	CBA-13
SENSOR (SENSOR, ANALOG PRE PROCESS) P. C. BOARD (FOR PAL) .....	CBA-14
AV OUT P. C. BOARD (FOR NTSC) .....	CBA-14
DC INPUT P. C. BOARD (FOR NTSC) .....	CBA-13
SENSOR (SENSOR, ANALOG PRE PROCESS SECTION) P. C. BOARD (FOR NTSC) .....	CBA-15
PROCESS (PROCESS, LENS DRIVE SECTION) P. C. BOARD (FOR NTSC) .....	CBA-16
PROCESS (PROCESS, LENS DRIVE SECTION) P. C. BOARD (FOR PAL) .....	CBA-17

### IMPORTANT SAFETY NOTICE

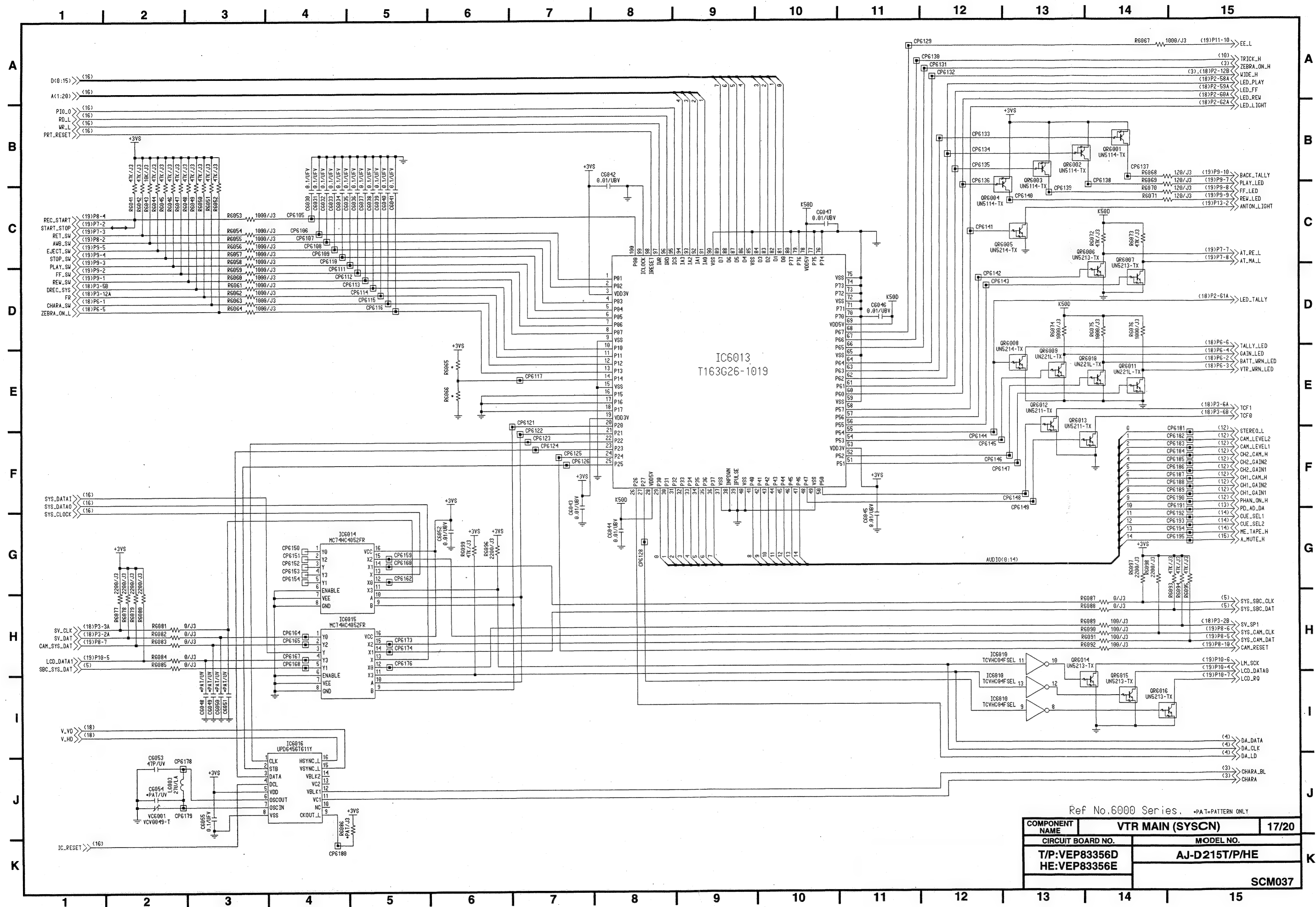
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.

WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

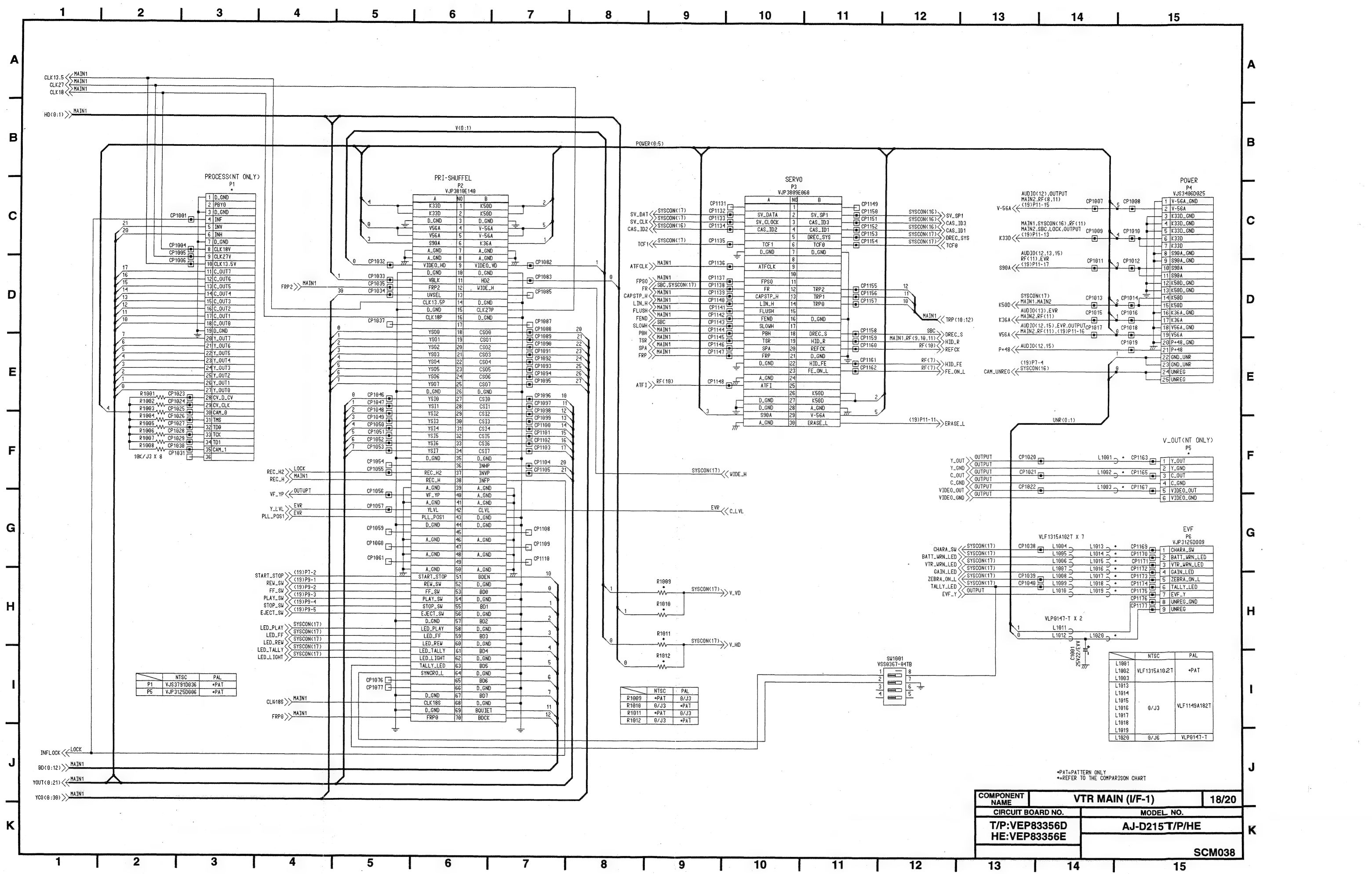
DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST.

AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.





Ref No.6000 Series.			*PAT=PATTERN ONLY
COMPONENT NAME	VTR MAIN (SYSCN)	17/20	
CIRCUIT BOARD NO.	MODEL NO.		
T/P:VEP83356D	AJ-D215T/P/HE		
HE:VEP83356E	SCM037		



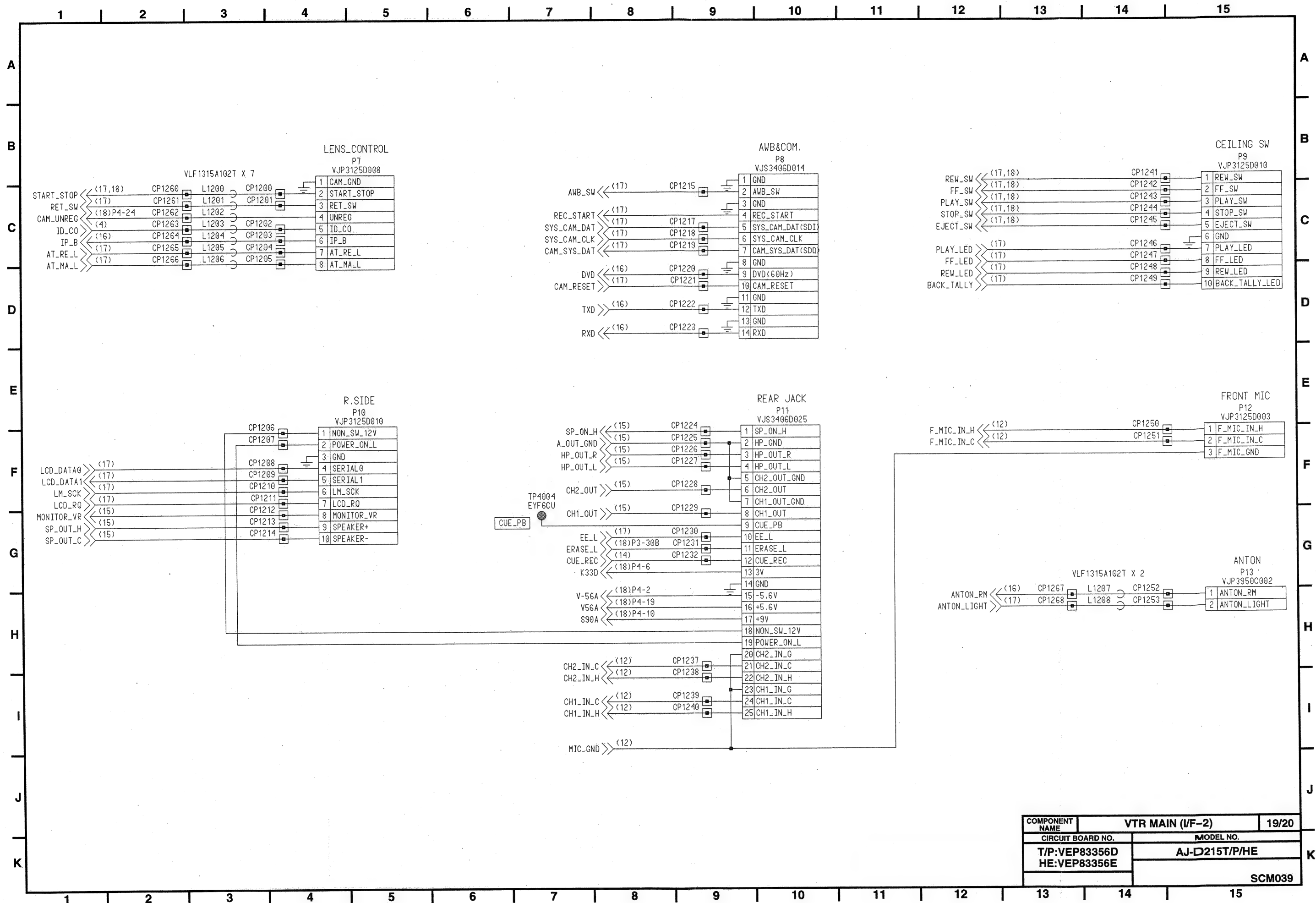
	NTSC	PAL
P1	VJS37910036	*PAT
P5	VJP31250096	*PAT

	NTSC	PAL
R1009	*PAT	0/J3
R1010	0/J3	*PAT
R1011	*PAT	0/J3
R1012	0/J3	*PAT

	NTSC	PAL
L1001	VLF1315A102T	*PAT
L1002		
L1003		
L1013		
L1014		
L1015	0/J3	VLF1149A182T
L1016		
L1017		
L1018		
L1019	0/J6	VLP0147-T
L1020		

COMPONENT NAME	VTR MAIN (I/F-1)	18/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P: VEP83356D	AJ-D215T/P/HE	
HE: VEP83356E		
SCM038		

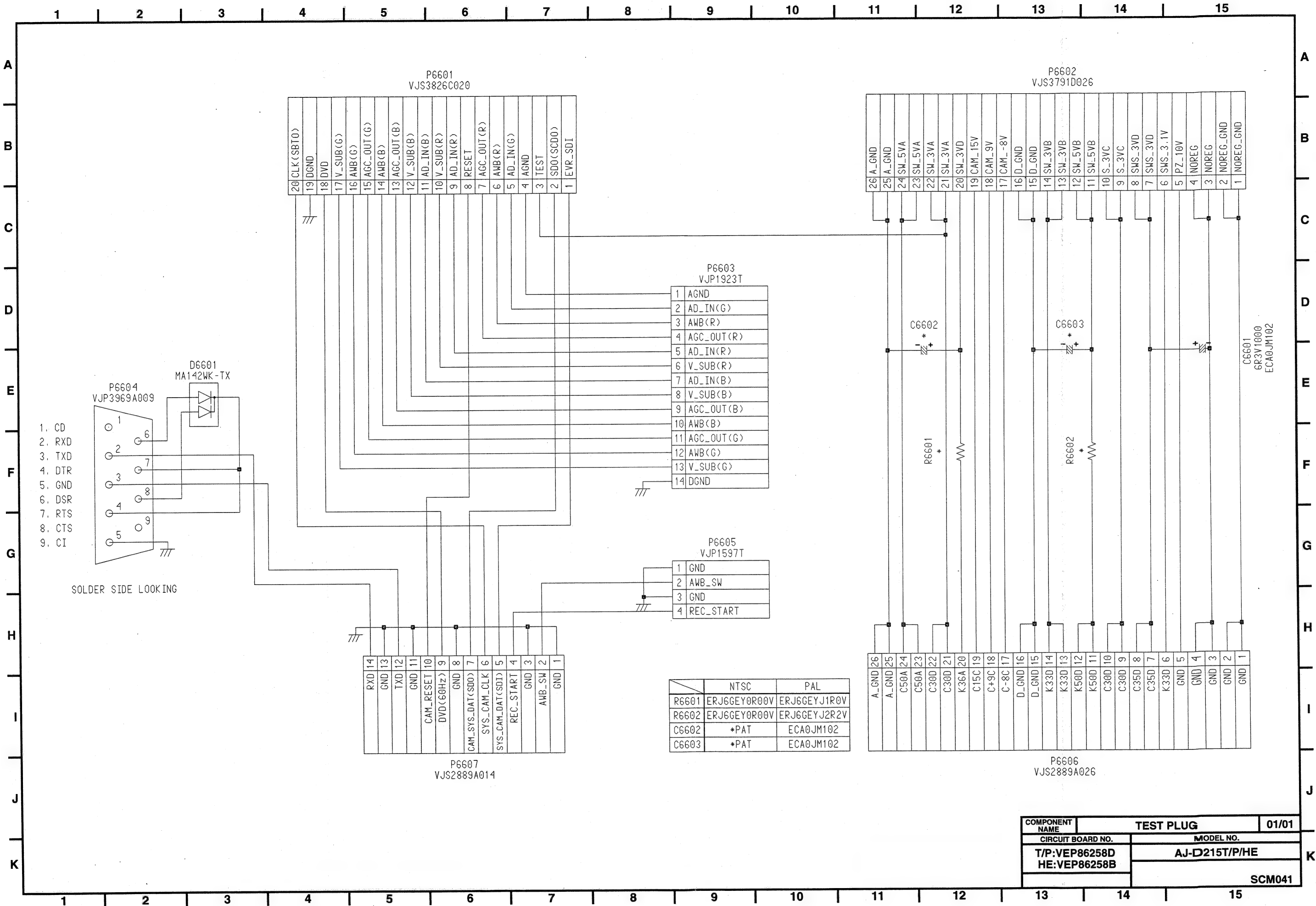
\*PAT= PATTERN ONLY  
\*REFER TO THE COMPARISON CHART

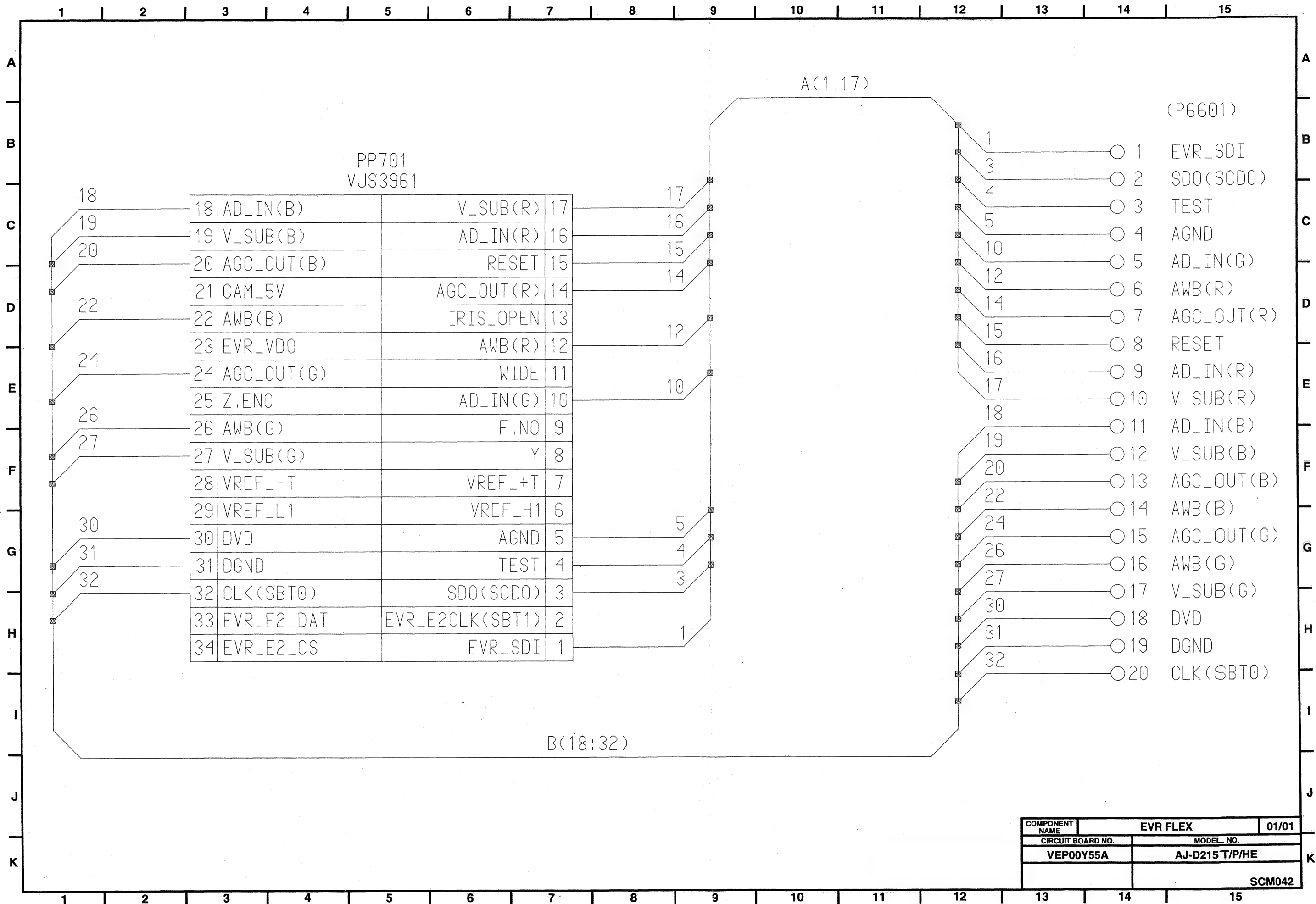


COMPONENT NAME	VTR MAIN (V/F-2)	19/20
CIRCUIT BOARD NO.	MODEL NO.	
T/P:VEP83356D	AJ-D215T/P/HE	
HE:VEP83356E		
	SCM039	

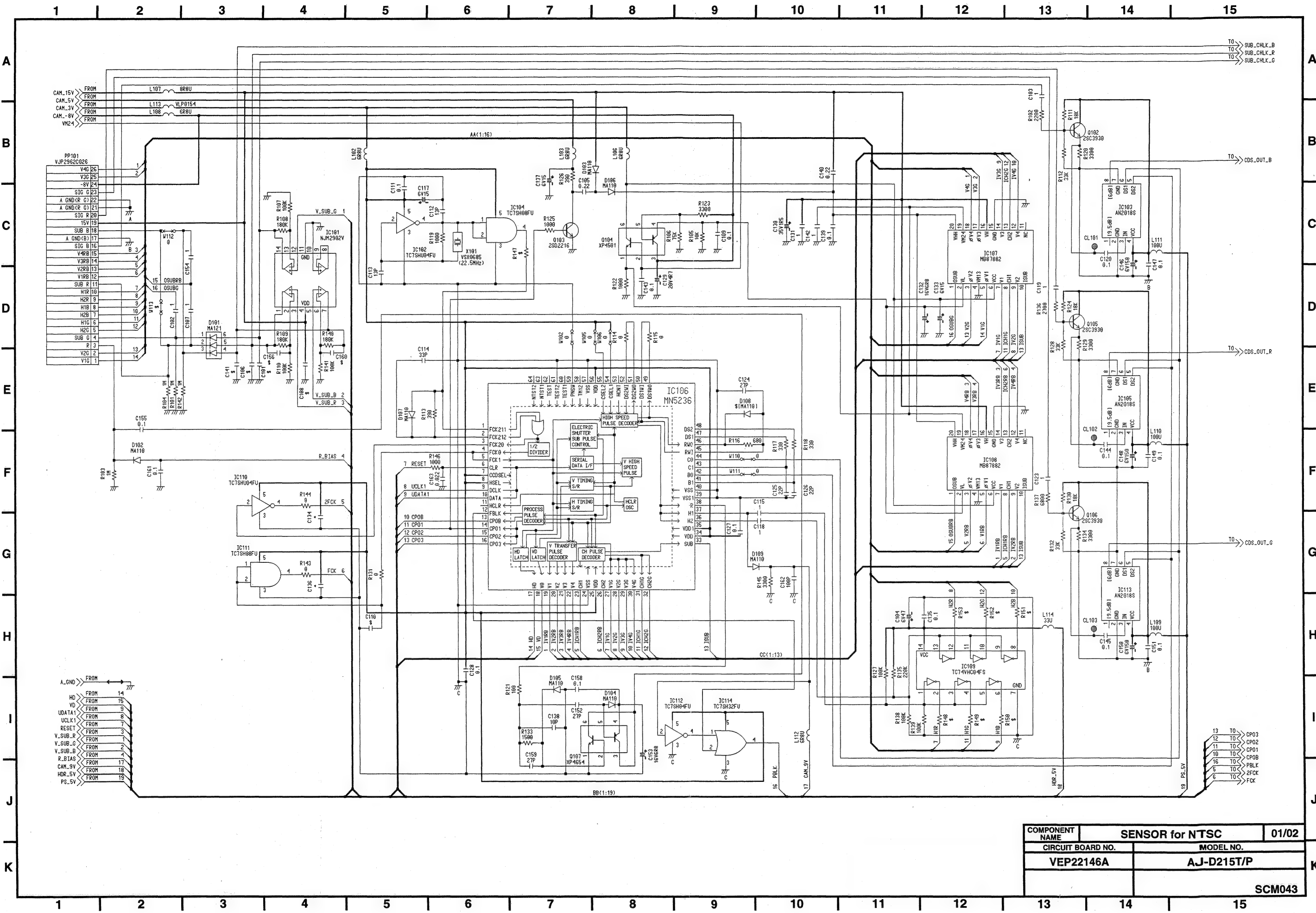
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A		\$REF\$	PAL	NTSC	\$REF\$	PAL	NTSC	\$REF\$	PAL	NTSC	\$REF\$	PAL	NTSC	\$REF\$	PAL	NTSC	A
		C124	*PAT/UV	*PAT/UV	C61	*PAT	*PAT	R111	*PAT/J3	*PAT/J3	R262	*PAT/J3	*PAT/J3	R4132	10K/J3	10K/J3	
		C125	*PAT/UV	*PAT/UV	C63	*PAT/UBV	*PAT/UBV	R112	*PAT/J3	*PAT/J3	R263	*PAT/J3	*PAT/J3	R4138	*PAT/J3	*PAT/J3	
		C127	*PAT/UV	*PAT/UV	C64	*PAT/UBV	*PAT/UBV	R116	*PAT/J3	*PAT/J3	R264	*PAT/J3	*PAT/J3	R4140	22K/J3	22K/J3	
		C128	*PAT/UV	*PAT/UV	C65	*PAT/UBV	*PAT/UBV	R117	*PAT/J3	*PAT/J3	R265	*PAT/J3	*PAT/J3	R4145	100K/J3	100K/J3	
		C129	*PAT/UFV	*PAT/UFV	C80	*PAT/UBV	*PAT/UBV	R118	*PAT/J3	*PAT/J3	R266	*PAT/J3	*PAT/J3	R4231	8200/J3	15K/J3	
		C130	*PAT/UFV	*PAT/UFV	C81	*PAT/UBV	*PAT/UBV	R135	*PAT/J3	*PAT/J3	R267	*PAT/J3	*PAT/J3	R4232	10K/J3	10K/J3	
B		C131	*PAT/UBV	*PAT/UBV	C82	*PAT/UBV	*PAT/UBV	R136	*PAT/J3	*PAT/J3	R268	*PAT/J3	*PAT/J3	R4238	*PAT/J3	*PAT/J3	
		C136	*PAT/UV	*PAT/UV	C88	*PAT/UBV	*PAT/UBV	R137	*PAT/J3	*PAT/J3	R269	*PAT/J3	*PAT/J3	R4240	22K/J3	22K/J3	
		C137	*PAT/UV	*PAT/UV	FL2	*PAT	*PAT	R138	*PAT/J3	*PAT/J3	R27	*PAT/J3	*PAT/J3	R4245	100K/J3	100K/J3	
		C142	*PAT/UFV	*PAT/UFV	FL4	*PAT	*PAT	R139	*PAT/J3	*PAT/J3	R270	*PAT/J3	*PAT/J3	R505	*PAT/J3	*PAT/J3	
		C143	*PAT/UV	*PAT/UV	IC15	*PAT	*PAT	R141	*PAT/J3	*PAT/J3	R271	*PAT/J3	*PAT/J3	R527	*PAT/J3	*PAT/J3	
		C144	*PAT/UV	*PAT/UV	IC2	MN4707F	MN4707F	R142	*PAT/J3	*PAT/J3	R272	*PAT/J3	*PAT/J3	R529	*PAT/J3	*PAT/J3	
		C145	*PAT/UV	*PAT/UV	IC26	*PAT	*PAT	R143	*PAT/J3	*PAT/J3	R273	*PAT/J3	*PAT/J3	R531	*PAT/J3	*PAT/J3	
C		C149	*PAT/UBN	*PAT/UBN	IC31	*PAT	*PAT	R145	*PAT/J3	*PAT/J3	R274	*PAT/J3	*PAT/J3	R532	0/J3	0/J3	
		C150	*PAT/UFV	*PAT/UFV	IC32	*PAT	*PAT	R146	*PAT/J3	*PAT/J3	R275	*PAT/J3	*PAT/J3	R545	*PAT/J3	*PAT/J3	
		C151	*PAT/UFV	*PAT/UFV	IC3207	*PAT	*PAT	R147	*PAT/J3	*PAT/J3	R276	*PAT/RE7	*PAT/RE7	R548	*PAT/J3	*PAT/J3	
		C152	*PAT/EVV	*PAT/EVV	IC35	*PAT	*PAT	R148	*PAT/J3	*PAT/J3	R277	*PAT/J3	*PAT/J3	R6028	*PAT/J3	*PAT/J3	
		C153	*PAT/UV	*PAT/UV	IC48	*PAT	*PAT	R149	*PAT/J3	*PAT/J3	R278	*PAT/J3	*PAT/J3	R6065	*PAT/J3	*PAT/J3	
		C154	*PAT/UFV	*PAT/UFV	L10	*PAT/LA	*PAT/LA	R150	*PAT/J3	*PAT/J3	R279	*PAT/J3	*PAT/J3	R6066	0/J3	0/J3	
		C155	*PAT/EVN	*PAT/EVN	L12	*PAT/LC	*PAT/LC	R151	*PAT/J3	*PAT/J3	R280	*PAT/J3	*PAT/J3	R6086	*PAT/J3	*PAT/J3	
D		C156	*PAT/UBN	*PAT/UBN	L13	*PAT/LC	*PAT/LC	R153	*PAT/RE7	*PAT/RE7	R289	*PAT/RE7	*PAT/RE7	R74	*PAT/J3	*PAT/J3	
		C159	*PAT/UV	*PAT/UV	L17	*PAT/LC	*PAT/LC	R154	*PAT/J3	*PAT/J3	R290	*PAT/J3	*PAT/J3	R75	*PAT/J3	*PAT/J3	
		C160	15P/UV	15P/UV	L31	*PAT	*PAT	R155	*PAT/J3	*PAT/J3	R295	*PAT/J3	*PAT/J3	R76	*PAT	*PAT	
		C167	*PAT/EVV	*PAT/EVV	L40	*PAT/LA	*PAT/LA	R156	*PAT/J3	*PAT/J3	R296	*PAT/J3	*PAT/J3	R77	*PAT	*PAT	
		C181	*PAT/UV	*PAT/UV	L41	*PAT/LA	*PAT/LA	R157	*PAT/J3	*PAT/J3	R300	*PAT/J3	*PAT/J3	R78	*PAT/J3	*PAT/J3	
		C182	*PAT/UV	*PAT/UV	L1001	*PAT	*PAT	R158	*PAT/J3	*PAT/J3	R3010	*PAT/J3	*PAT/J3	R81	*PAT/J3	*PAT/J3	
E		C183	*PAT/UFV	*PAT/UFV	L1002	*PAT	*PAT	R161	*PAT/J3	*PAT/J3	R3012	*PAT/J3	*PAT/J3	R84	*PAT/J3	*PAT/J3	
		C184	*PAT/UFV	*PAT/UFV	L1003	*PAT	*PAT	R162	*PAT/J3	*PAT/J3	R3210	*PAT/RE7	*PAT/RE7	R85	*PAT/J3	*PAT/J3	
		C186	*PAT/UFV	*PAT/UFV	L1013	VLF1149A182T	VLF1149A182T	R163	*PAT/J3	*PAT/J3	R3211	*PAT/RE7	*PAT/RE7	R86	*PAT/J3	*PAT/J3	
		C187	*PAT/EVV	*PAT/EVV	L1014	VLF1149A182T	VLF1149A182T	R164	*PAT/J3	*PAT/J3	R3227	*PAT/J3	*PAT/J3	R87	*PAT/J3	*PAT/J3	
		C189	*PAT/UFV	*PAT/UFV	L1015	VLF1149A182T	VLF1149A182T	R165	*PAT/J3	*PAT/J3	R3264	*PAT/J3	*PAT/J3	R88	*PAT/J3	*PAT/J3	
		C190	*PAT/EVV	*PAT/EVV	L1016	VLF1149A182T	VLF1149A182T	R166	*PAT/RE7	*PAT/RE7	R3293	*PAT/J3	*PAT/J3	R89	*PAT/J3	*PAT/J3	
		C196	*PAT/UFV	*PAT/UFV	L1017	VLF1149A182T	VLF1149A182T	R167	*PAT/RE7	*PAT/RE7	R3294	*PAT/J3	*PAT/J3	R90	*PAT/J3	*PAT/J3	
		C197	*PAT/UBV	*PAT/UBV	L1018	VLF1149A182T	VLF1149A182T	R168	*PAT/J3	*PAT/J3	R3295	*PAT/J3	*PAT/J3	R91	*PAT/J3	*PAT/J3	
F		C3101	*PAT/UV	*PAT/UV	L1019	VLF1149A182T	VLF1149A182T	R169	*PAT/J3	*PAT/J3	R3296	*PAT/J3	*PAT/J3	R92	*PAT/J3	*PAT/J3	
		C3103	*PAT/UV	*PAT/UV	L1020	VLP0147-T	VLP0147-T	R170	*PAT/J3	*PAT/J3	R3342	*PAT/J3	*PAT/J3	R93	*PAT/J3	*PAT/J3	
		C3108	*PAT/UV	*PAT/UV	L3302	*PAT/LA	*PAT/LA	R171	*PAT/J3	*PAT/J3	R3400	*PAT/J3	*PAT/J3	R94	*PAT/J3	*PAT/J3	
		C3110	*PAT/UV	*PAT/UV	P1	*PAT	*PAT	R179	*PAT/J3	*PAT/J3	R3401	*PAT/J3	*PAT/J3	R95	*PAT/J3	*PAT/J3	
		C3209	*PAT/UV	*PAT/UV	P5	*PAT	*PAT	R180	*PAT/J3	*PAT/J3	R3402	*PAT/J3	*PAT/J3	R96	*PAT/J3	*PAT/J3	
		C3216	*PAT/UV	*PAT/UV	P14	VJP3950C006	VJP3950C006	R181	*PAT/J3	*PAT/J3	R3403	*PAT/J3	*PAT/J3	R97	*PAT/J3	*PAT/J3	
G		C3226	*PAT/UV	*PAT/UV	Q1	*PAT	*PAT	R182	*PAT/J6	*PAT/J6	R3404	*PAT/J3	*PAT/J3	R98	*PAT/RE7	*PAT/RE7	
		C3230	*PAT/UV	*PAT/UV	Q11	*PAT	*PAT	R189	*PAT/J3	*PAT/J3	R3405	*PAT/J3	*PAT/J3	R99	*PAT/J3	*PAT/J3	
		C3237	*PAT/UV	*PAT/UV	Q12	*PAT	*PAT	R190	0/J3	0/J3	R3406	*PAT/J3	*PAT/J3	TP13	*PAT	*PAT	
		C3248	*PAT/UFV	*PAT/UFV	Q13	*PAT	*PAT	R199	*PAT/J3	*PAT/J3	R3407	*PAT/J3	*PAT/J3	TP14	*PAT	*PAT	
		C3249	*PAT/UFV	*PAT/UFV	Q14	*PAT	*PAT	R220	*PAT/J3	*PAT/J3	R3408	*PAT/J3	*PAT/J3	TP15	*PAT	*PAT	
		C3250	*PAT/UFV	*PAT/UFV	Q15	*PAT	*PAT	R221	*PAT/J3	*PAT/J3	R3409	*PAT/J3	*PAT/J3	TP3	*PAT	*PAT	
		C3251	*PAT/USV	*PAT/USV	Q18	*PAT	*PAT	R229	*PAT/J3	*PAT/J3	R3410	*PAT/J3	*PAT/J3	TP4	*PAT	*PAT	
		C3252	*PAT/USV	*PAT/USV	Q19	*PAT	*PAT	R230	47/J3	47/J3	R3411	*PAT/J3	*PAT/J3	VC1	*PAT	*PAT	
H		C3253	*PAT/UFV	*PAT/UFV	Q2	*PAT	*PAT	R231	*PAT/J3	*PAT/J3	R3412	*PAT/J3	*PAT/J3	VR10	*PAT/VR5	*PAT/VR5	
		C3254	*PAT/USV	*PAT/USV	Q24	*PAT	*PAT	R233	1000/RE7	1000/RE7	R3413	*PAT/J3	*PAT/J3	VR12	*PAT/VR5	*PAT/VR5	
		C3255	*PAT/USV	*PAT/USV	Q3	*PAT	*PAT	R237	*PAT/J3	*PAT/J3	R3414	*PAT/J3	*PAT/J3	VR3300	*PAT/VR5	*PAT/VR5	
		C4064	6V330	6V330	Q3231	*PAT	*PAT	R239	0/J3	0/J3	R3415	*PAT/J3	*PAT/J3	VR5	*PAT/VR5	*PAT/VR5	
		C55	*PAT	*PAT	Q3232	*PAT	*PAT	R247	*PAT/RE7	*PAT/RE7	R3419	*PAT/J3	*PAT/J3	VR6	*PAT/VR5	*PAT/VR5	
		C56	*PAT	*PAT	Q3233	*PAT	*PAT	R248	*PAT/RE7	*PAT/RE7	R3421	*PAT/J3	*PAT/J3	VR7	*PAT/VR5	*PAT/VR5	
I		C57	*PAT/UBV	*PAT/UBV	Q3234	*PAT	*PAT	R252	*PAT/J3	*PAT/J3	R3422	*PAT/J3	*PAT/J3	VR8	*PAT/VR5	*PAT/VR5	
		C58	*PAT/EVV	*PAT/EVV	Q4	*PAT	*PAT	R254	*PAT/J3	*PAT/J3	R3430	*PAT/J3	*PAT/J3	X2	VSX0937	VSX0937	
		C59	*PAT/UBV	*PAT/UBV	Q5	*PAT	*PAT	R255	*PAT/J3	*PAT/J3	R3437	*PAT/J3	*PAT/J3				
		C60	*PAT	*PAT	Q7	*PAT	*PAT	R256	*PAT/J3	*PAT/J3	R3440	*PAT/J3	*PAT/J3				
		C6048	*PAT/UV	*PAT/UV	R1	*PAT/J3	*PAT/J3	R257	*PAT/J3	*PAT/J3	R3502	*PAT/J3	*PAT/J3				
		C6049	*PAT/UV	*PAT/UV	R1009	0/J3	0/J3	R258	*PAT/J3	*PAT/J3	R3507	*PAT/J3	*PAT/J3				
		C6050	*PAT/UV	*PAT/UV	R1010	*PAT/J3	*PAT/J3	R259	*PAT/J3	*PAT/J3	R3539	*PAT/J3	*PAT/J3				
J		C6051	*PAT/UV	*PAT/UV	R1011	0/J3	0/J3	R260	*PAT/J3	*PAT/J3	R4013	*PAT/J3	*PAT/J3				
		C6054	*PAT/UV	*PAT/UV	R1012	*PAT/J3	*PAT/J3	R261	*PAT/J3	*PAT/J3	R4131	8200/J3	15K/J3				



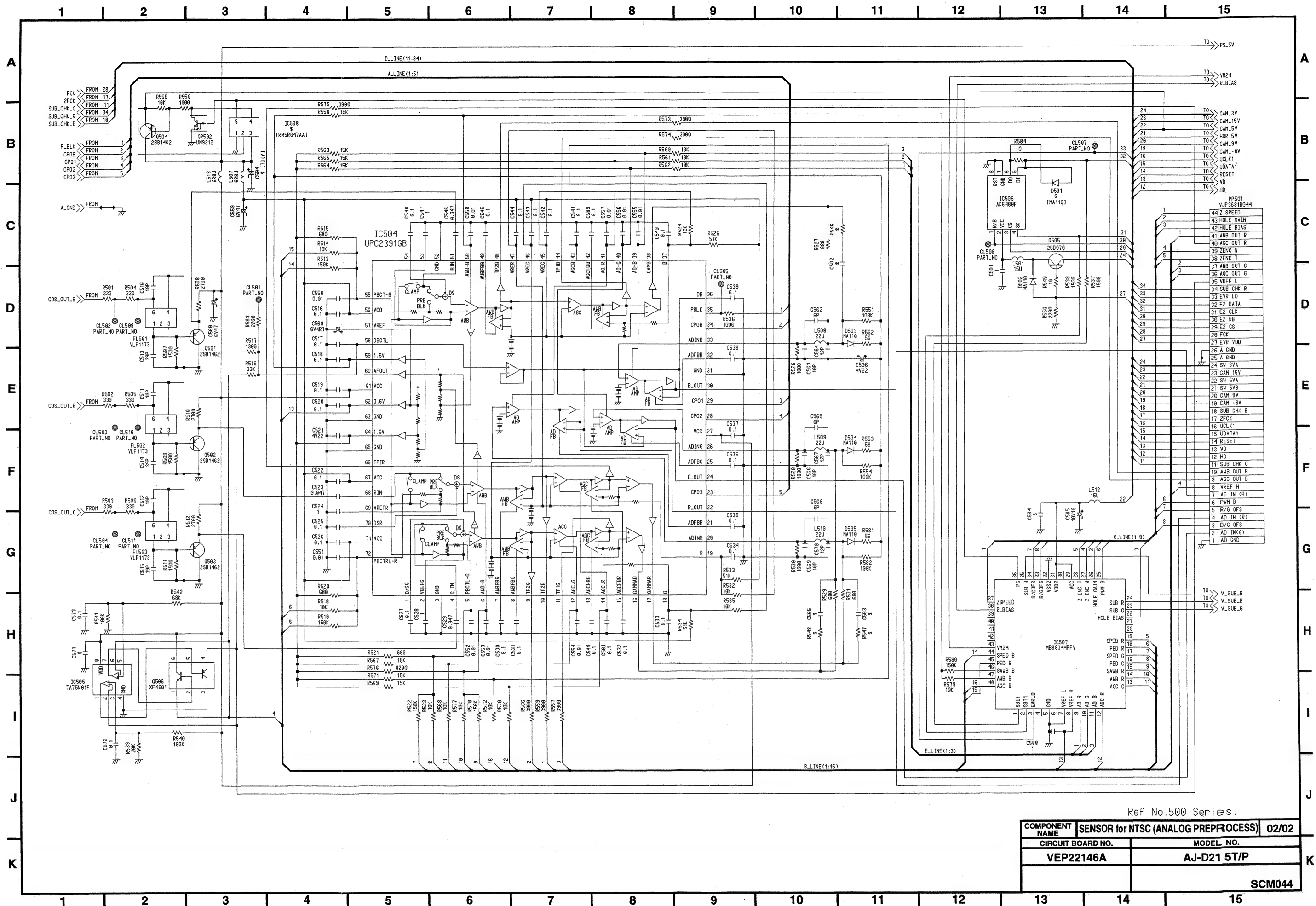




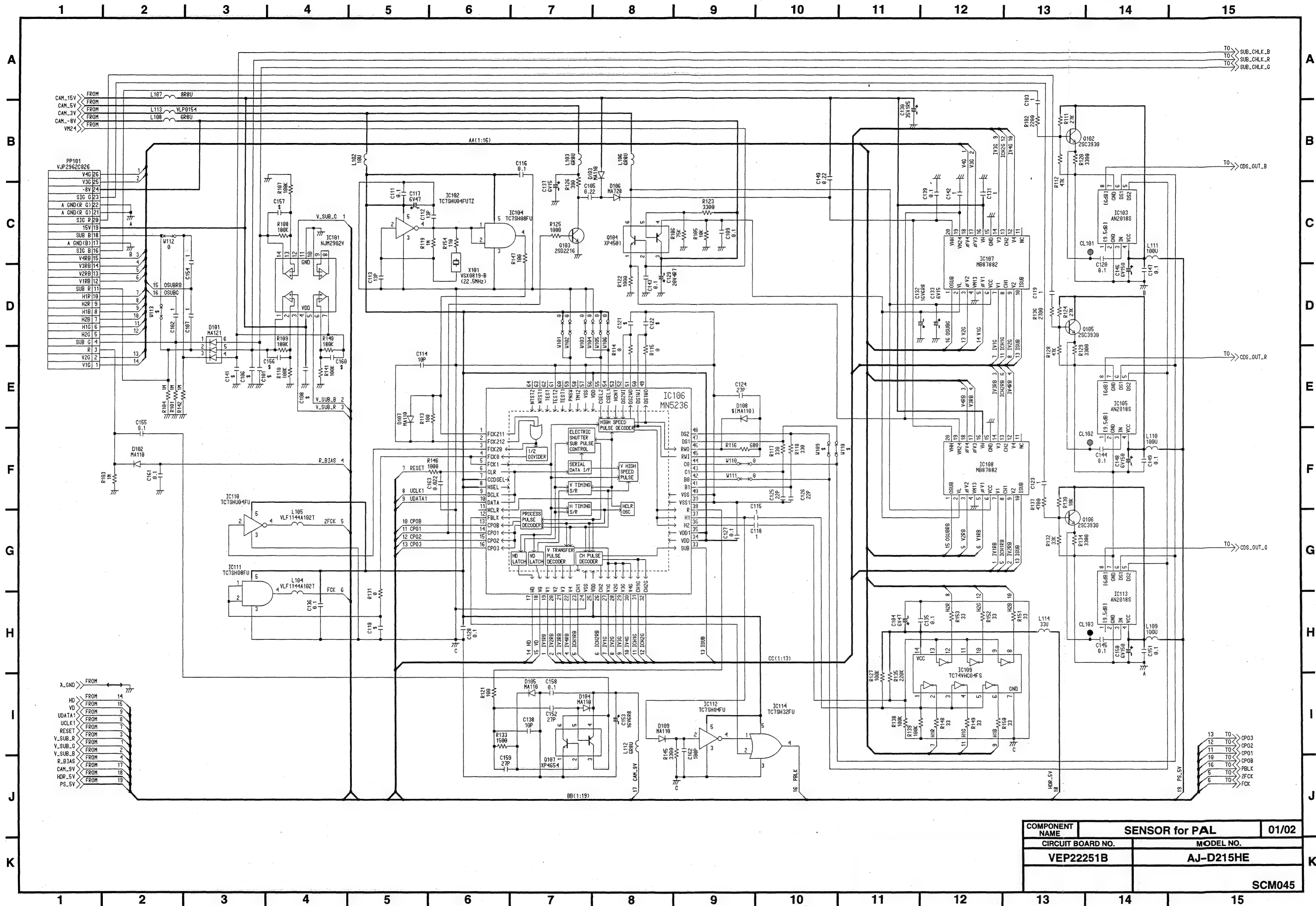
COMPONENT NAME	EVR FLEX	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP00Y55A	AJ-D215T/P/HE	
		SCM042

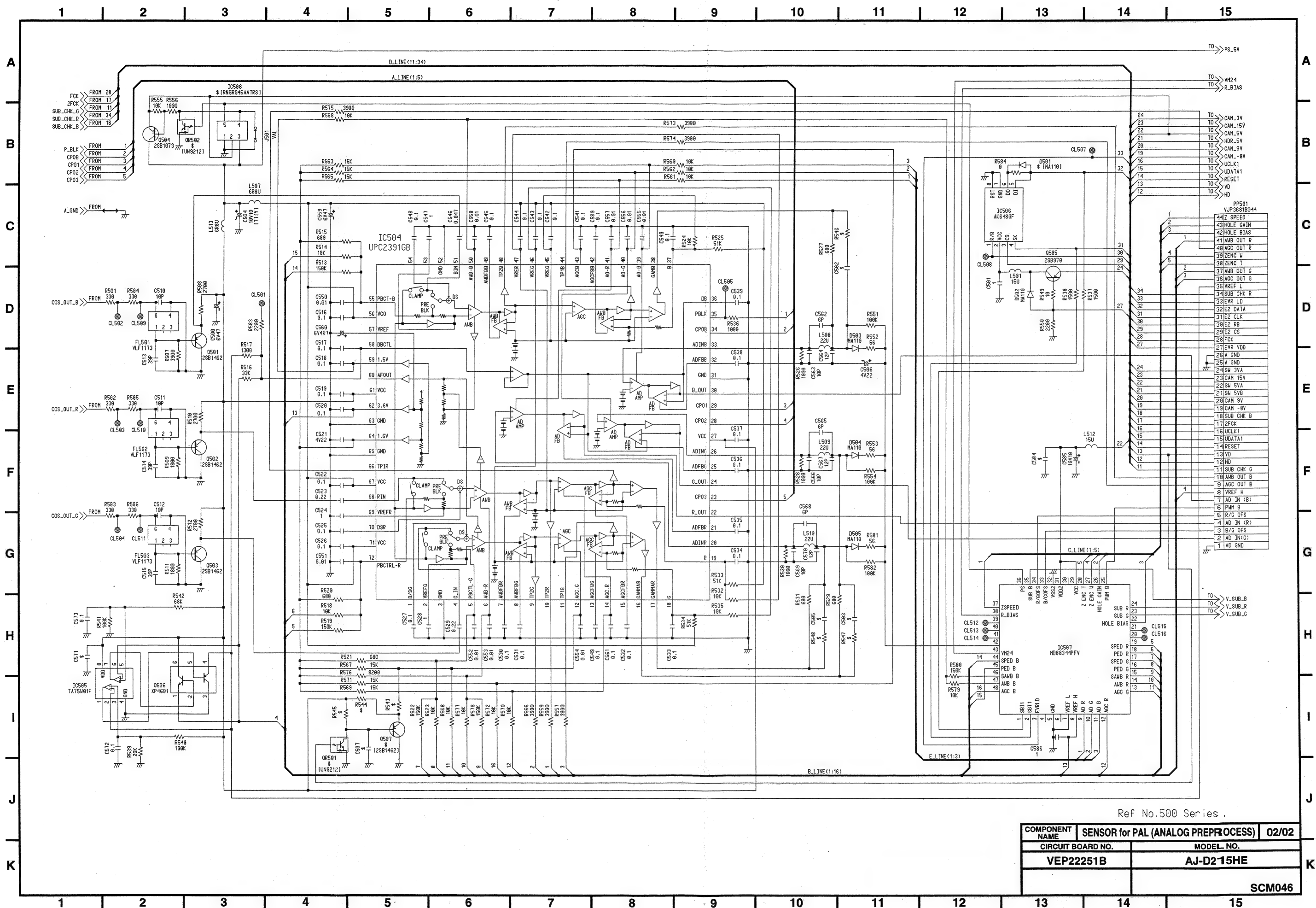


COMPONENT NAME	SENSOR for NTSC	01/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP22146A	AJ-D215T/P	
SCM043		



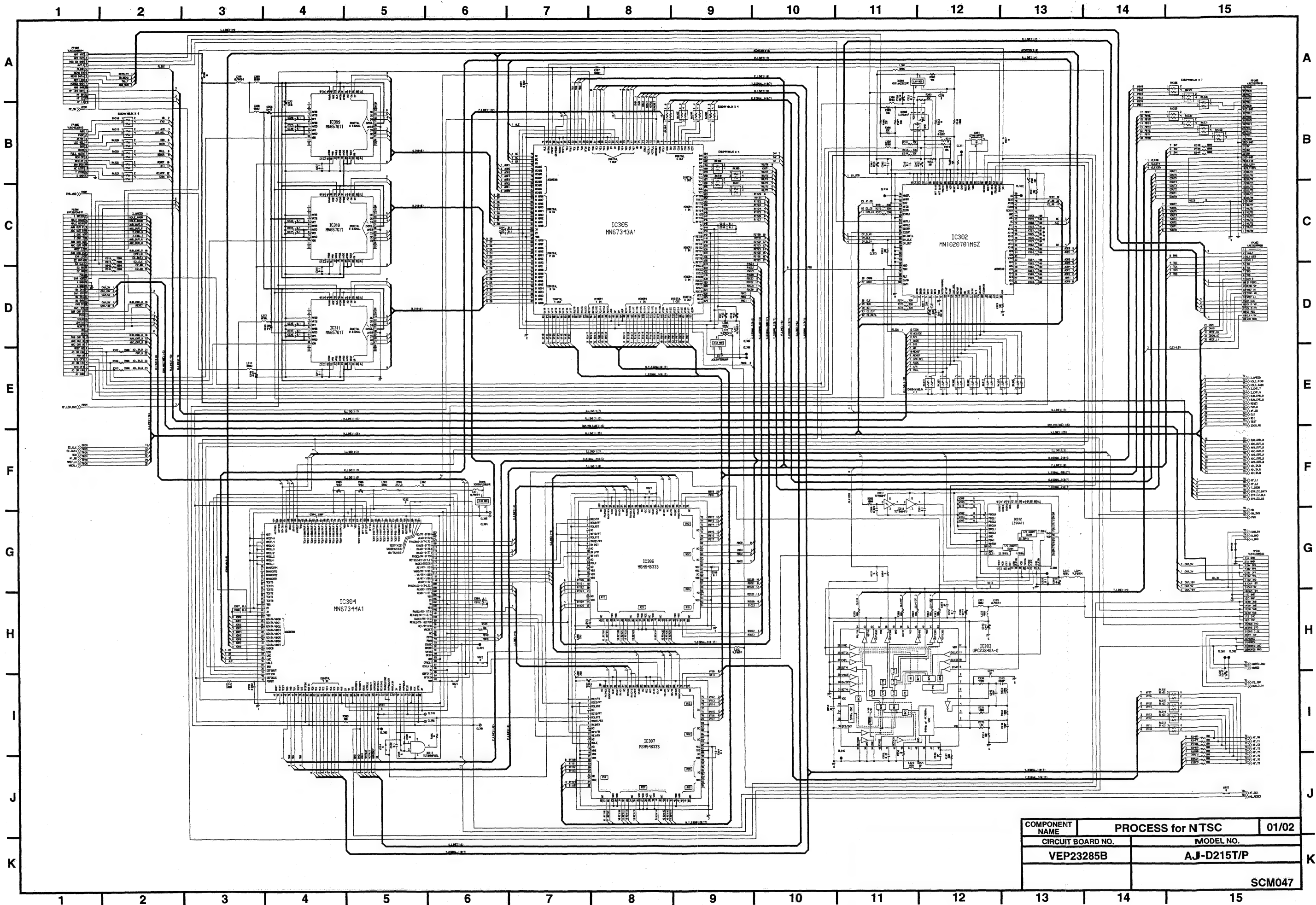




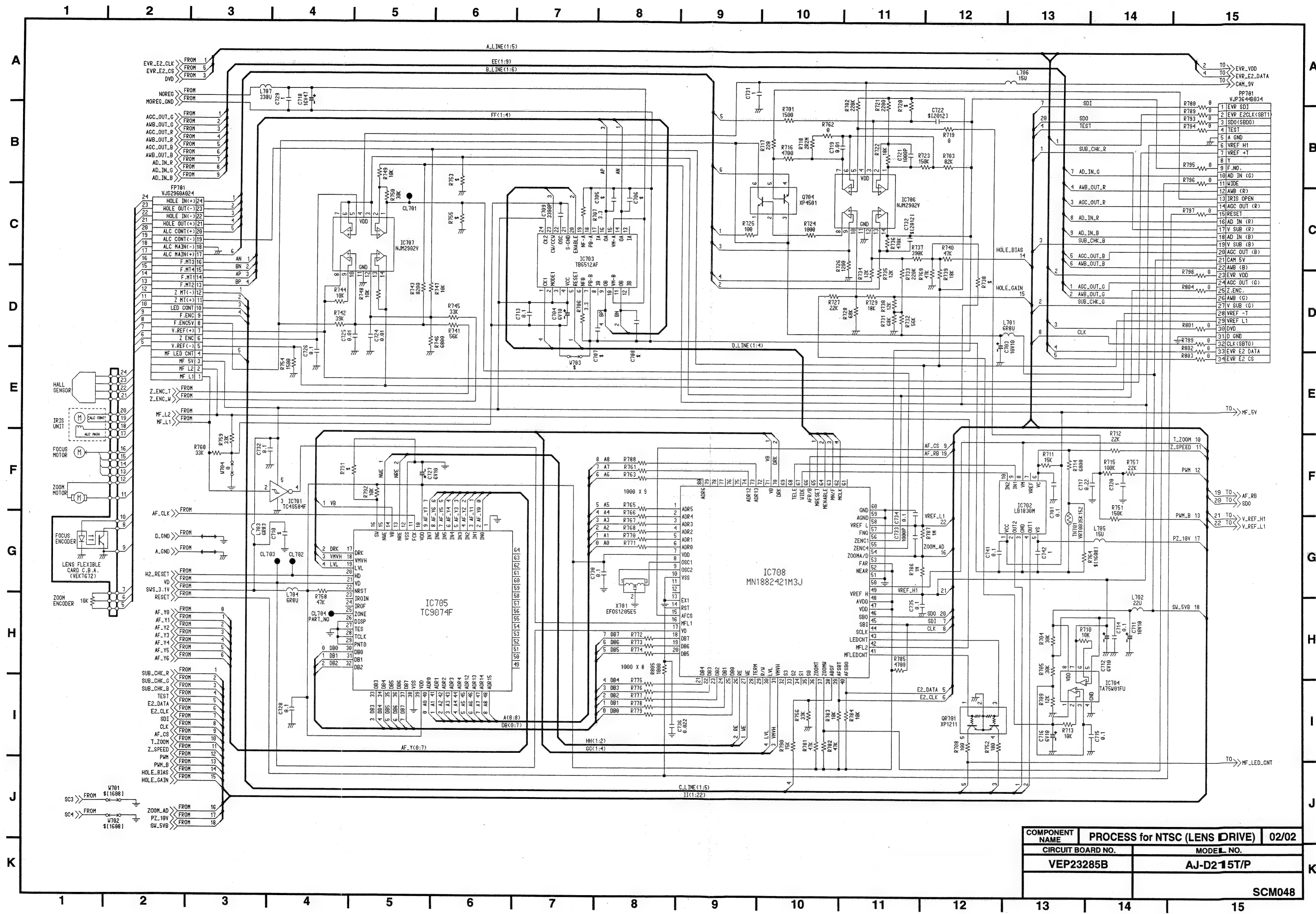


Ref No.500 Series .

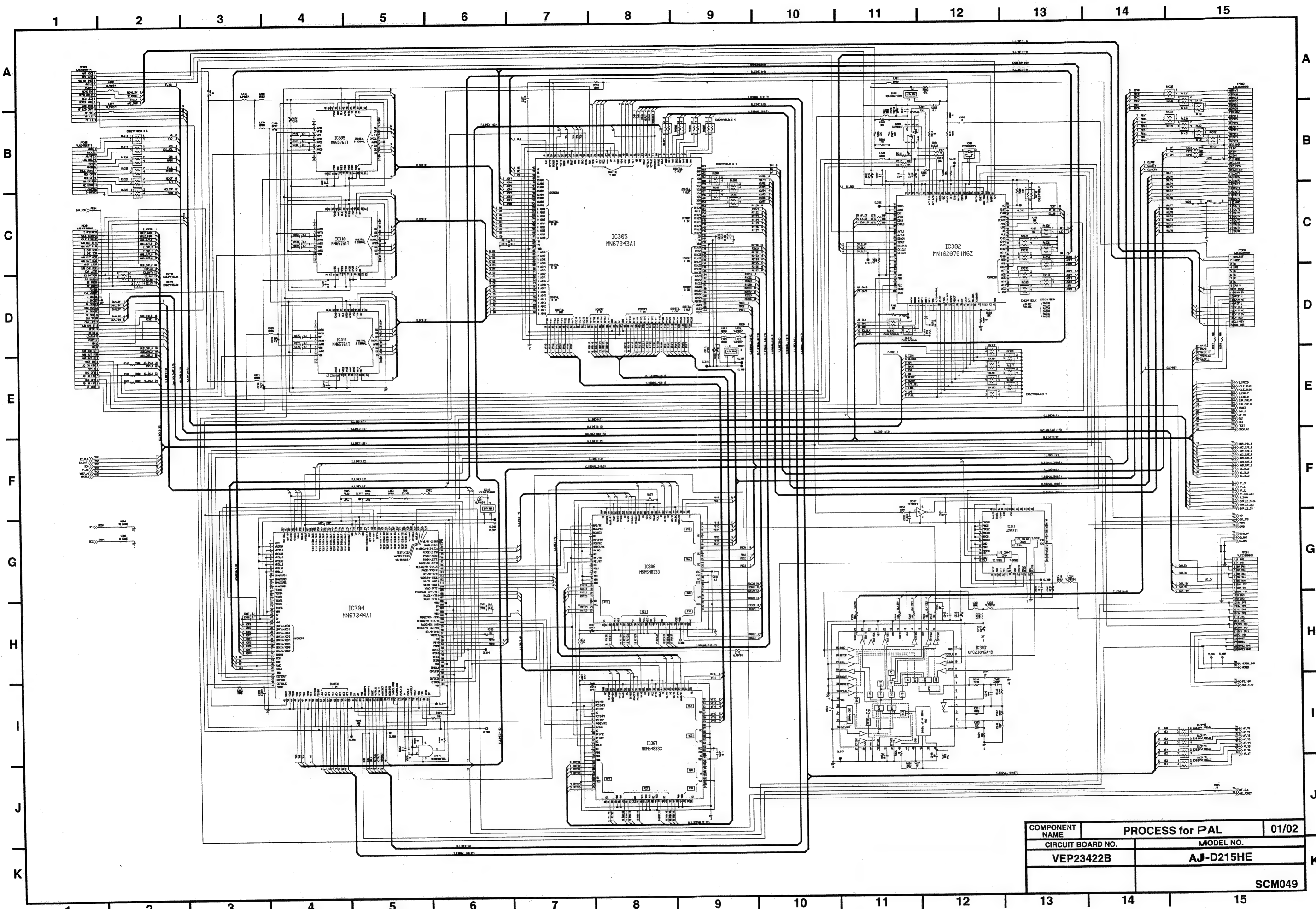
COMPONENT NAME	SENSOR for PAL (ANALOG PREPROCESS)		02/02
CIRCUIT BOARD NO.		MODEL NO.	
VEP22251B		AJ-D215HE	
		SCM046	

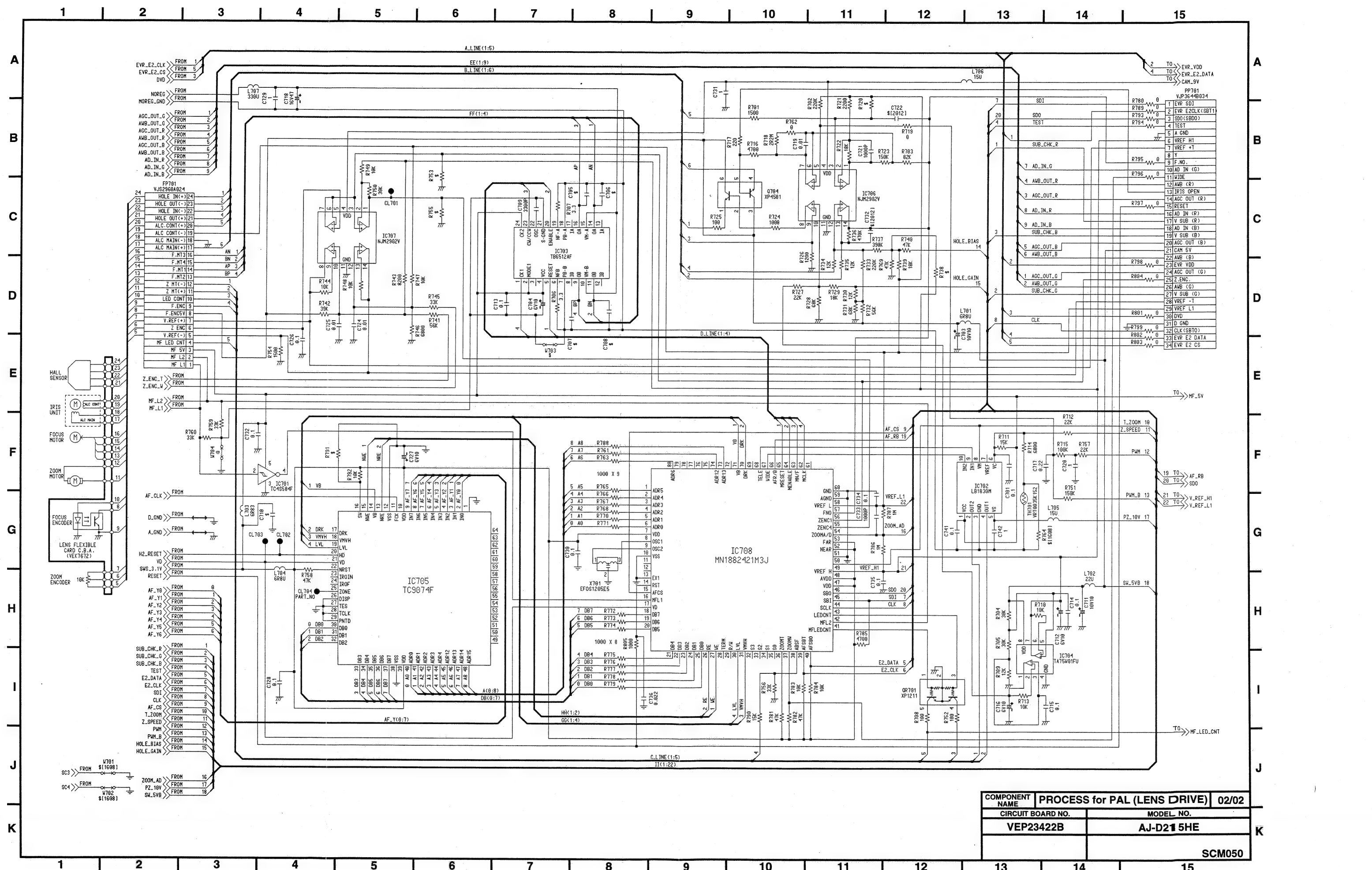




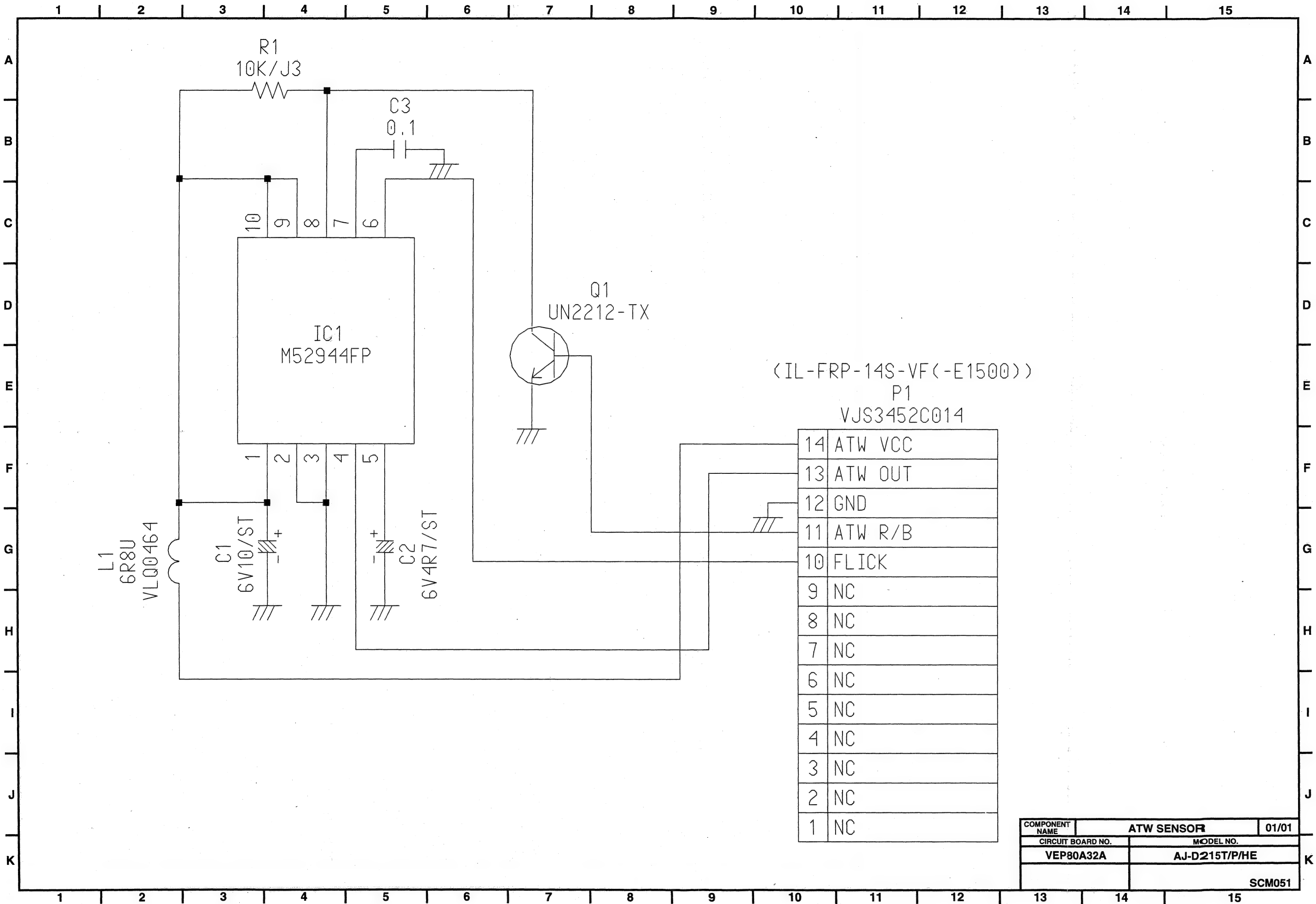


COMPONENT NAME	PROCESS for NTSC (LENS DRIVE)	02/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP23285B	AJ-D215T/P	
SCM048		

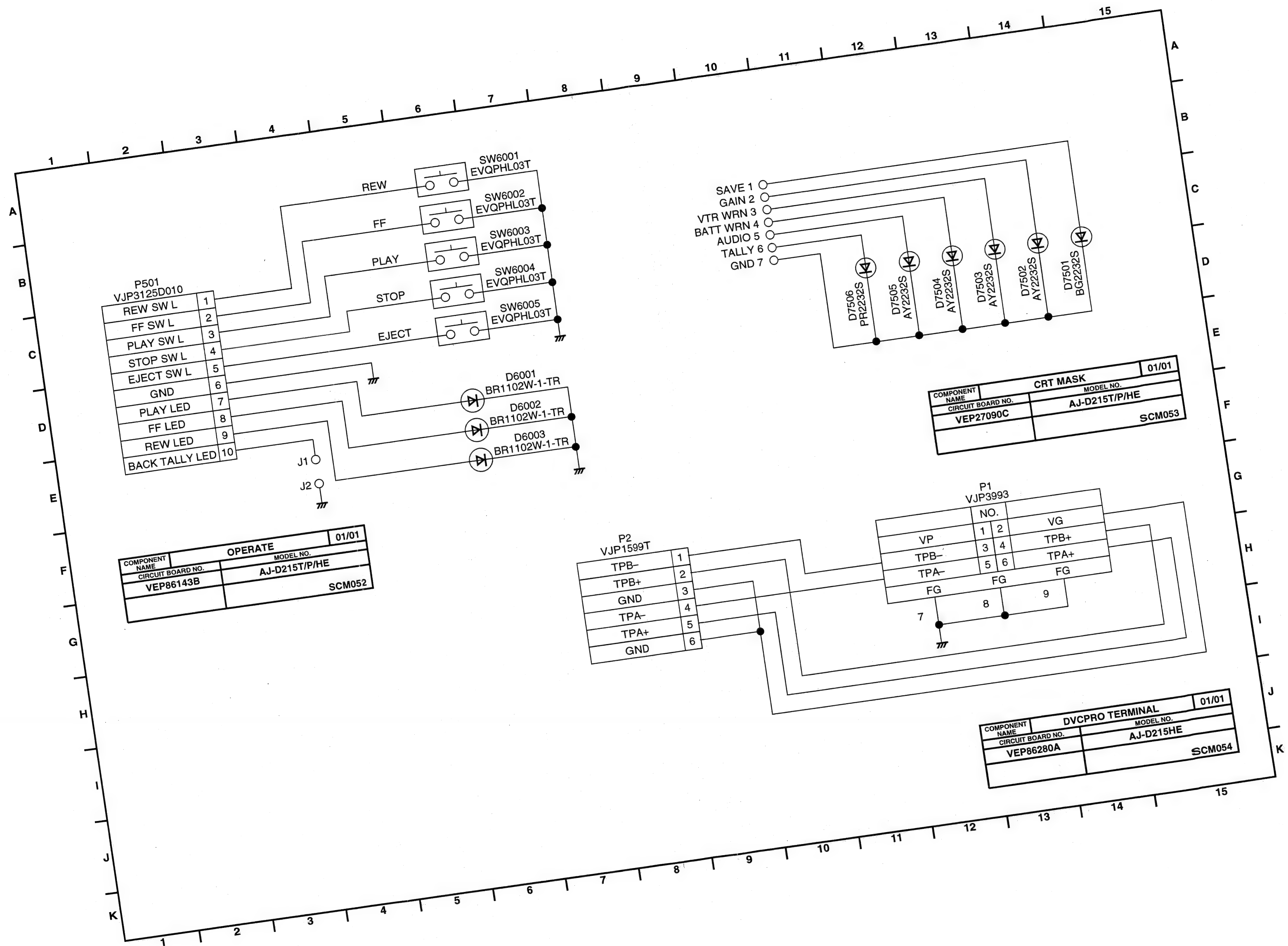




COMPONENT NAME		PROCESS for PAL (LENS DRIVE)		02/02
CIRCUIT BOARD NO.		MODEL NO.		
VEP23422B		AJ-D21 5HE		
				SCM050

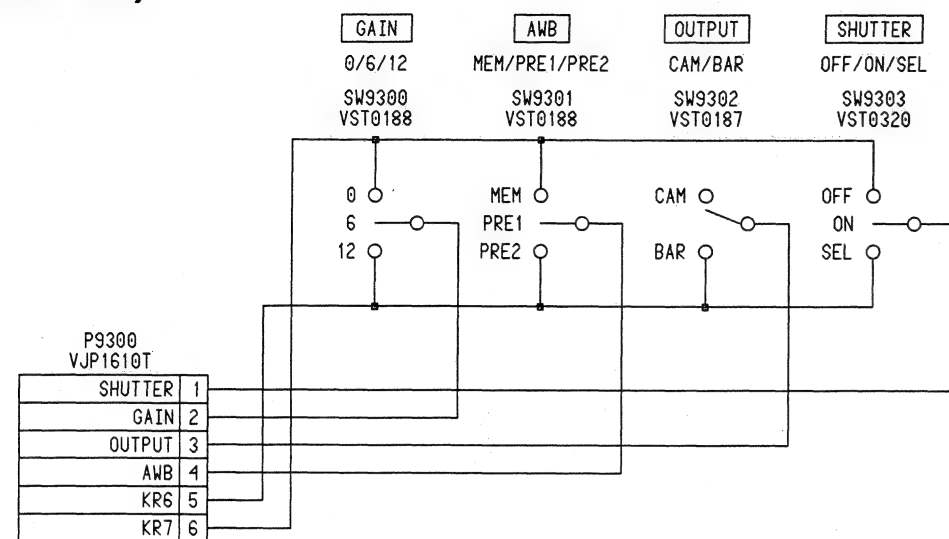




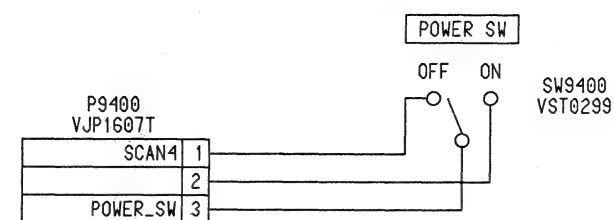




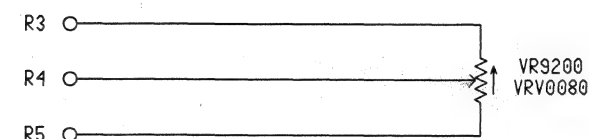
# TOGGLE SW SCHEMATIC DIAGRAM (VEP80A15A)



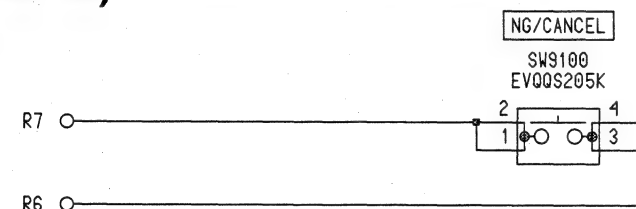
# POWER SW SCHEMATIC DIAGRAM (VEP80A16A)



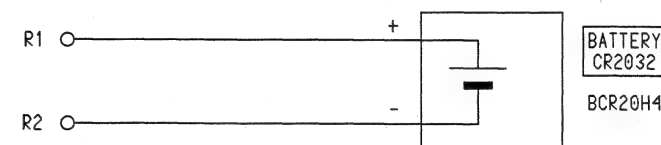
# MONITOR VR SCHEMATIC DIAGRAM (VEP80A18A)



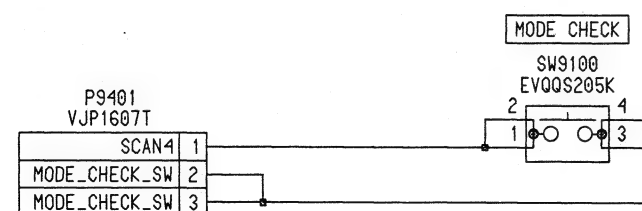
# FLEX LINK SCHEMATIC DIAGRAM (VEP80A21A)



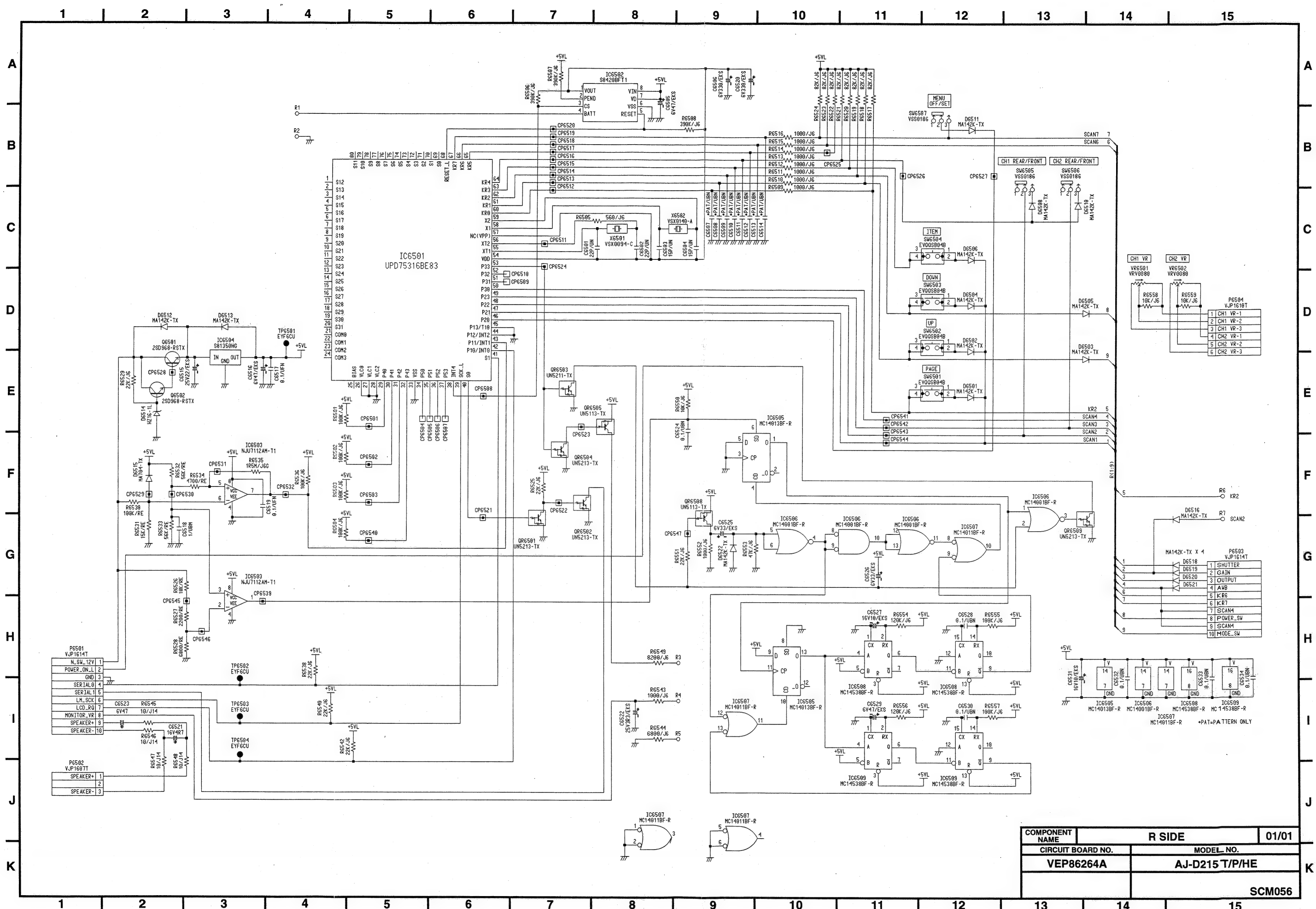
# BACK-UP BATTERY SCHEMATIC DIAGRAM (VEP80A19A)



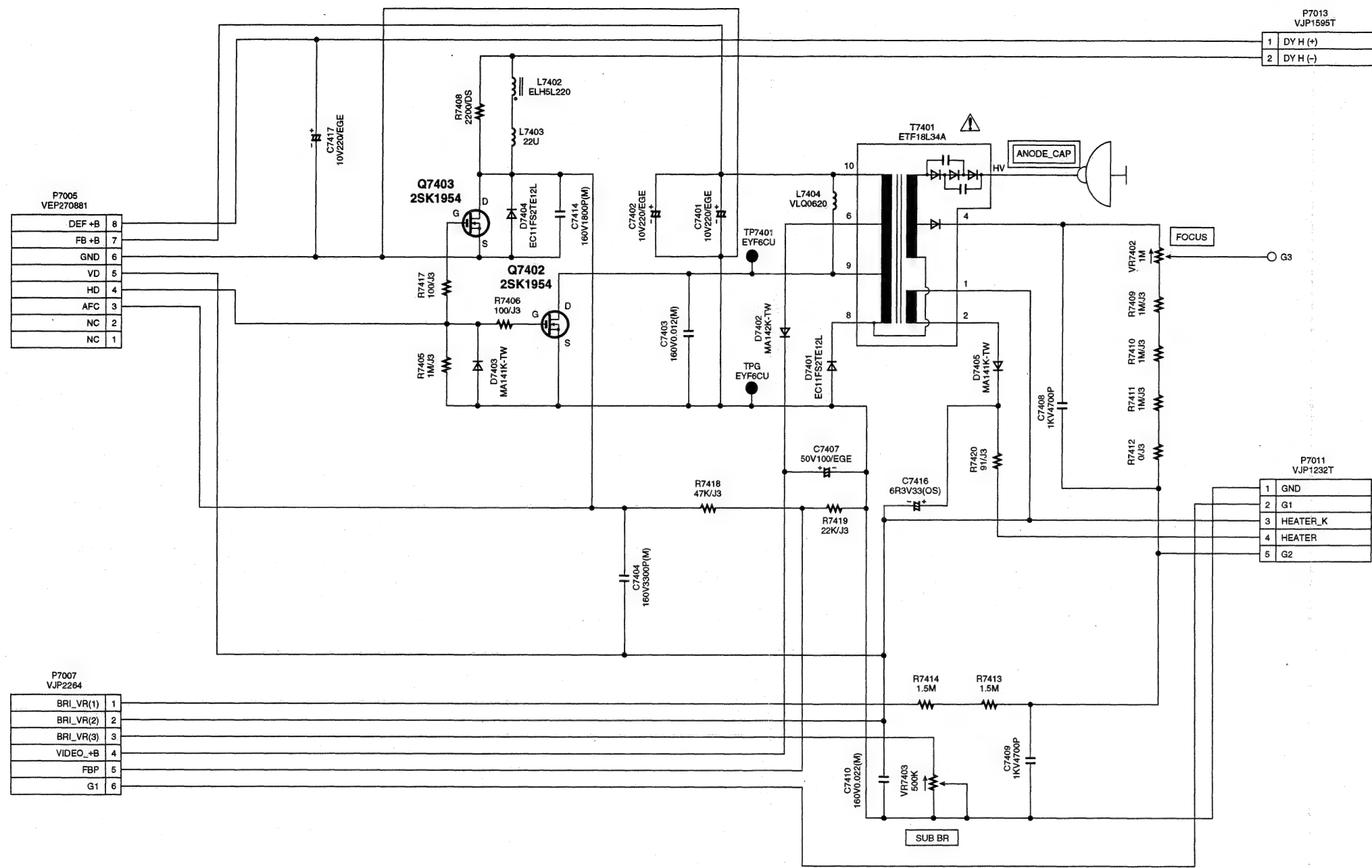
# MODE CHECK SCHEMATIC DIAGRAM (VEP80A17A)




COMPONENT NAME	TOGGLE SW etc.	01/01
CIRCUIT BOARD NO.	MODEL NO.	
	AJ-D215T/P/HE	
	SCM055	



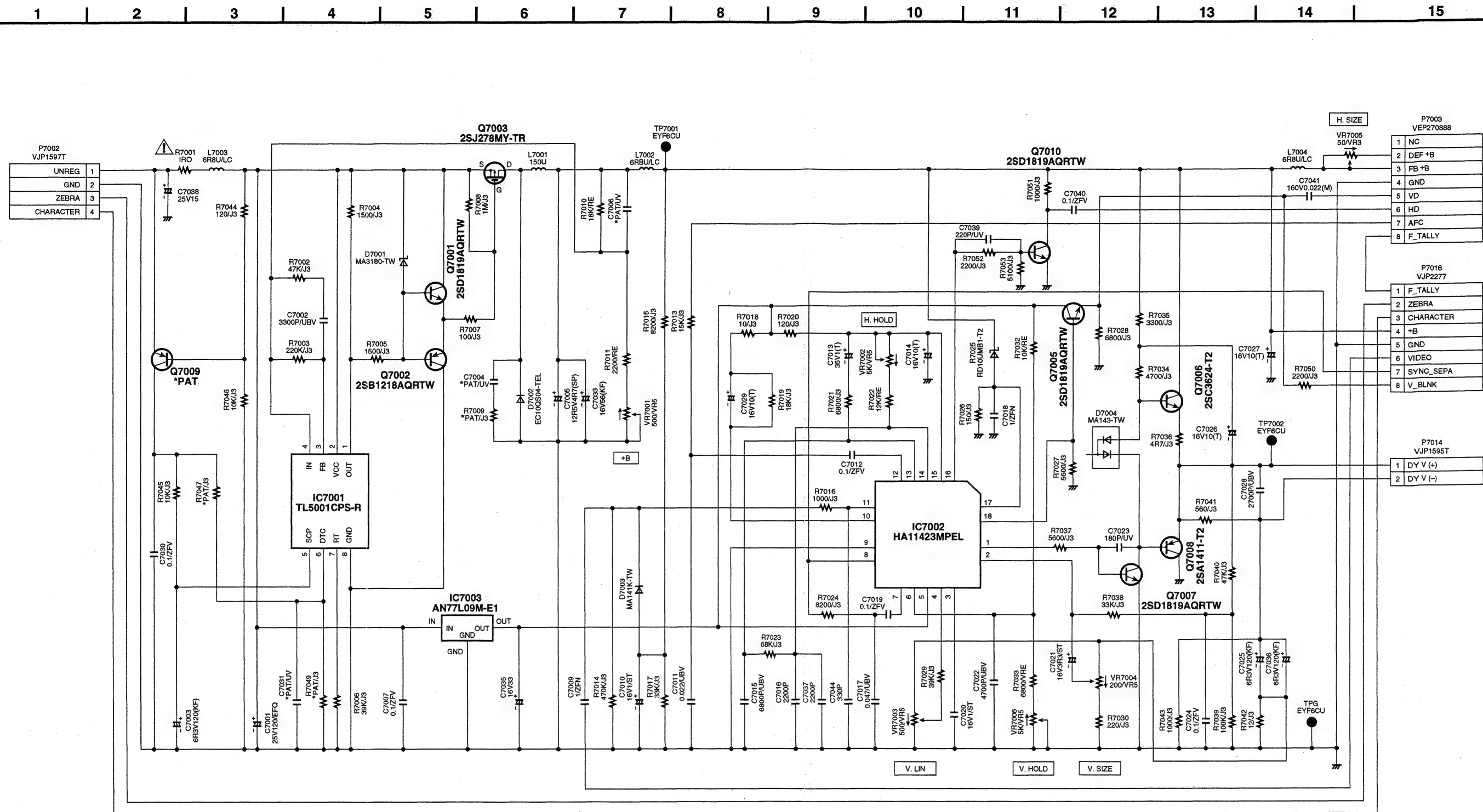
COMPONENT NAME		R SIDE		01/01
CIRCUIT BOARD NO.		MODEL NO.		
VEP86264A		AJ-D215 T/P/HE		
		SCM056		




**IMPORTANT SAFETY NOTICE :**  
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

 **警告** △印の部品は、安全上重要な部品です。交換するときは、安全及び性能維持のため必ず指定の部品をご使用ください。

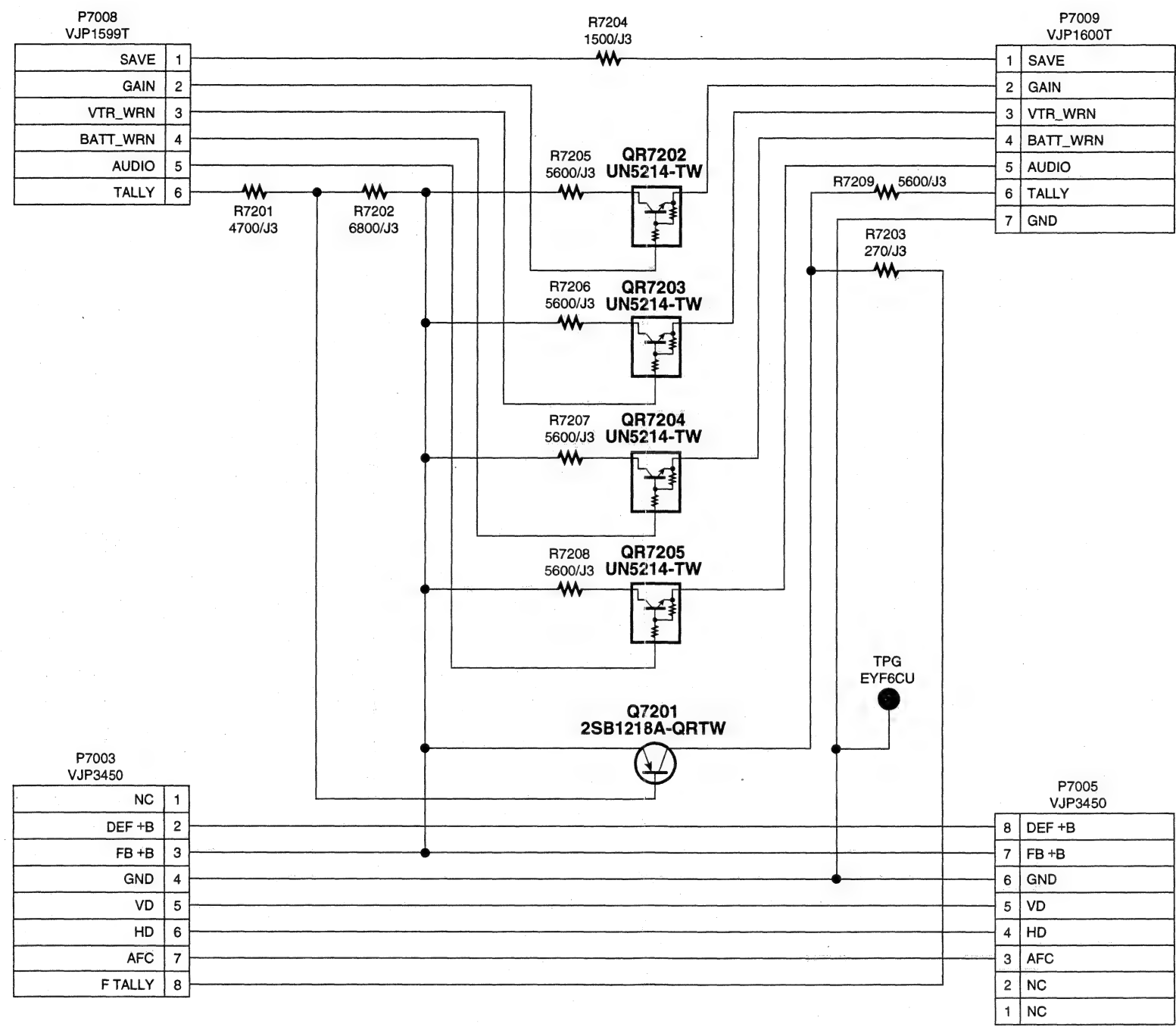
COMPONENT NAME	H DEF	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP27086A	AJ-D215T/P/HE	
	SCM057	



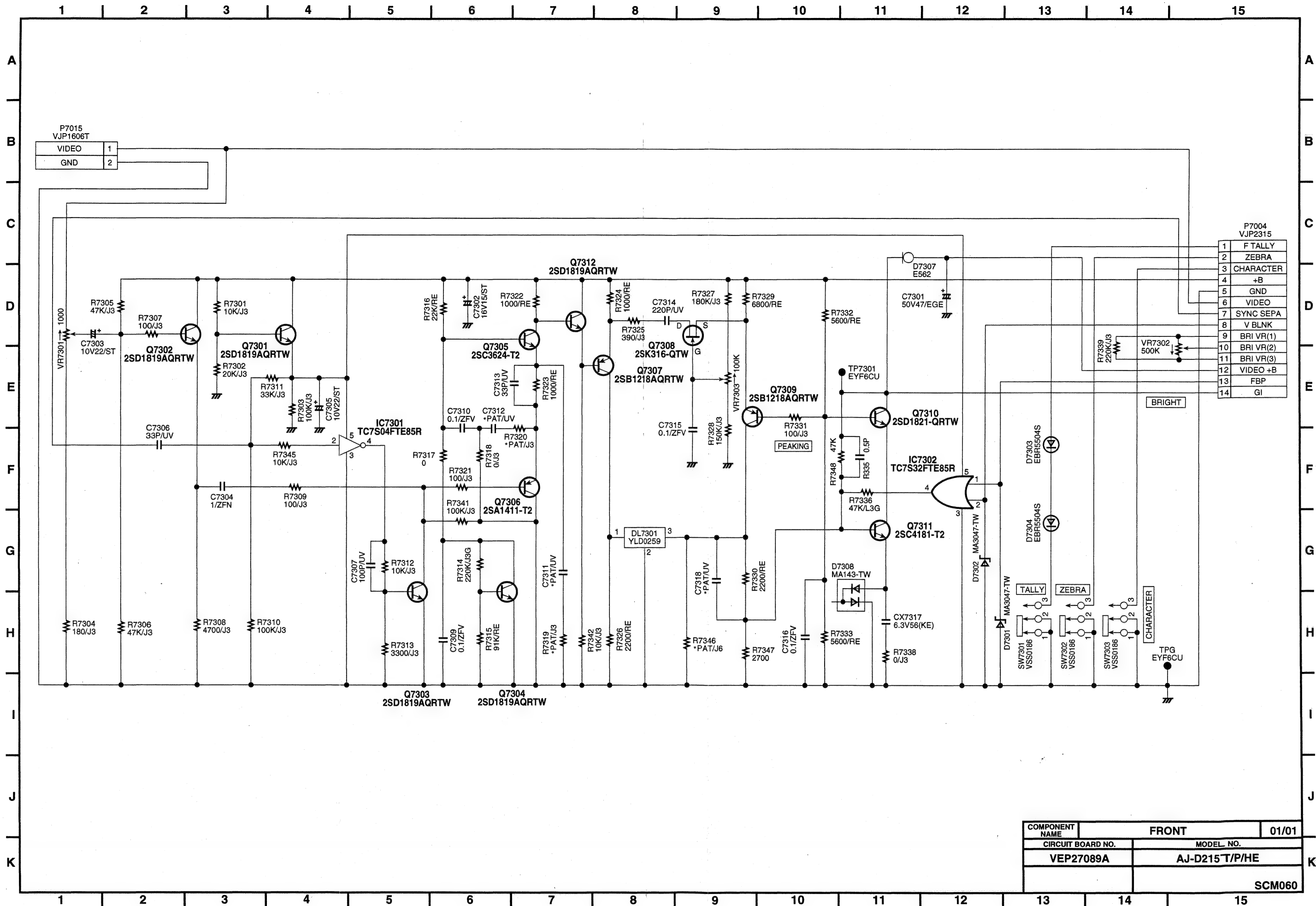
**IMPORTANT SAFETY NOTICE :**  
 COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS  
 FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

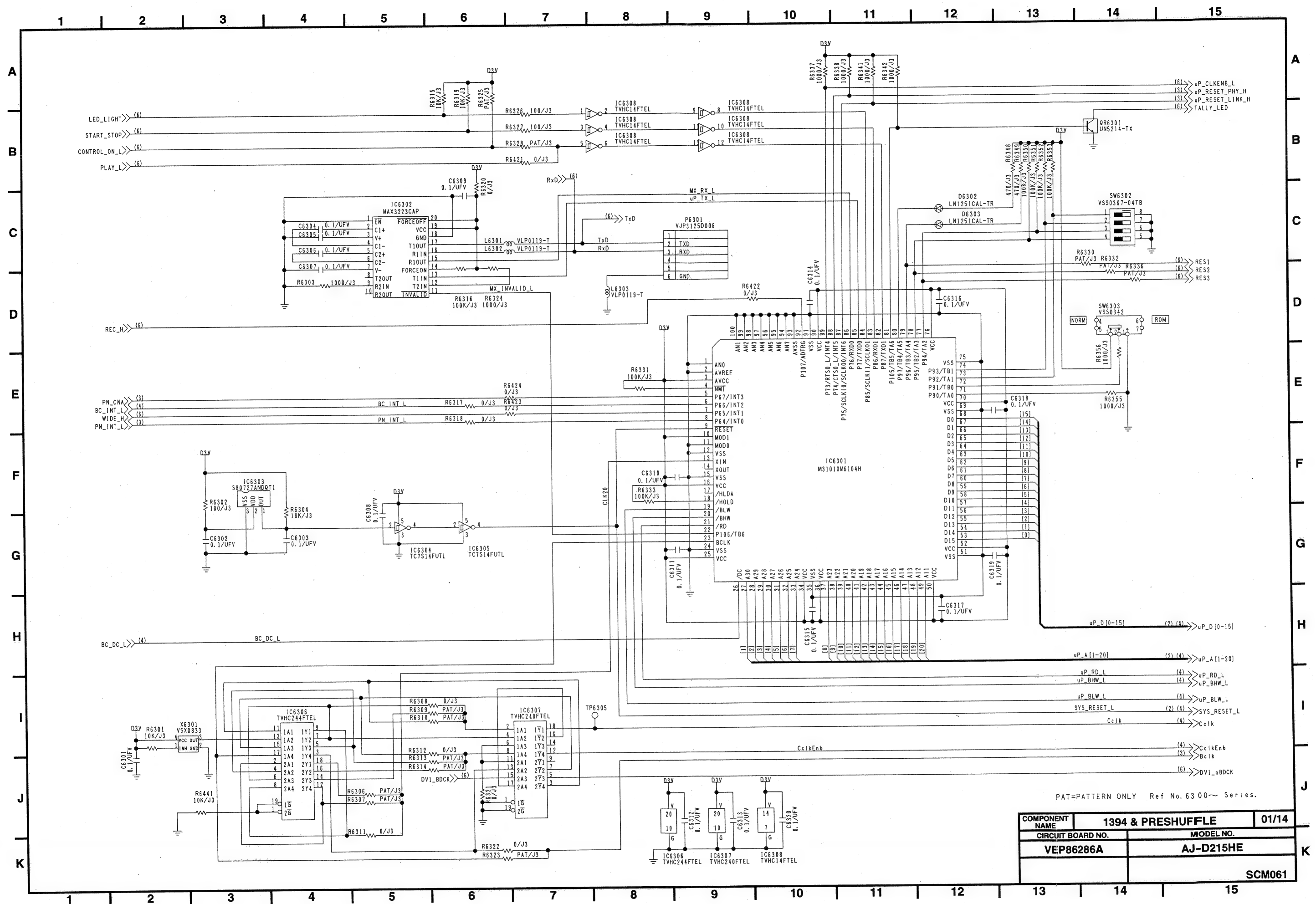
**警告**  印の部品は、安全上重要な部品です。交換するときは、  
 安全及び性能維持のため必ず指定の部品をご使用ください。

COMPONENT NAME	V DEF	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP27087A	AJ-D215T/P/HE	
SCM058		



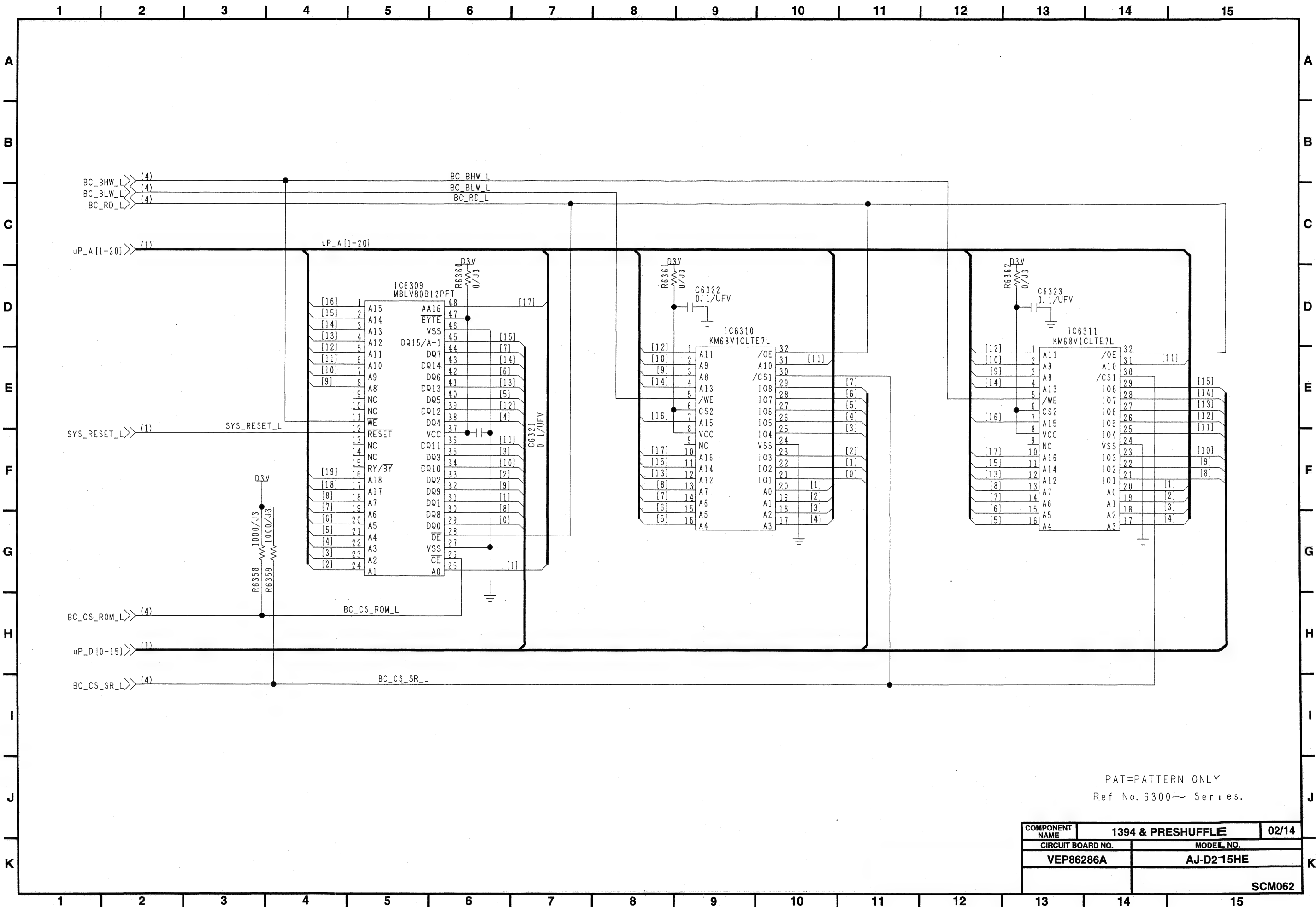
COMPONENT NAME	CN	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP27088A	AJ-D215T/P/HE	
		SCM059



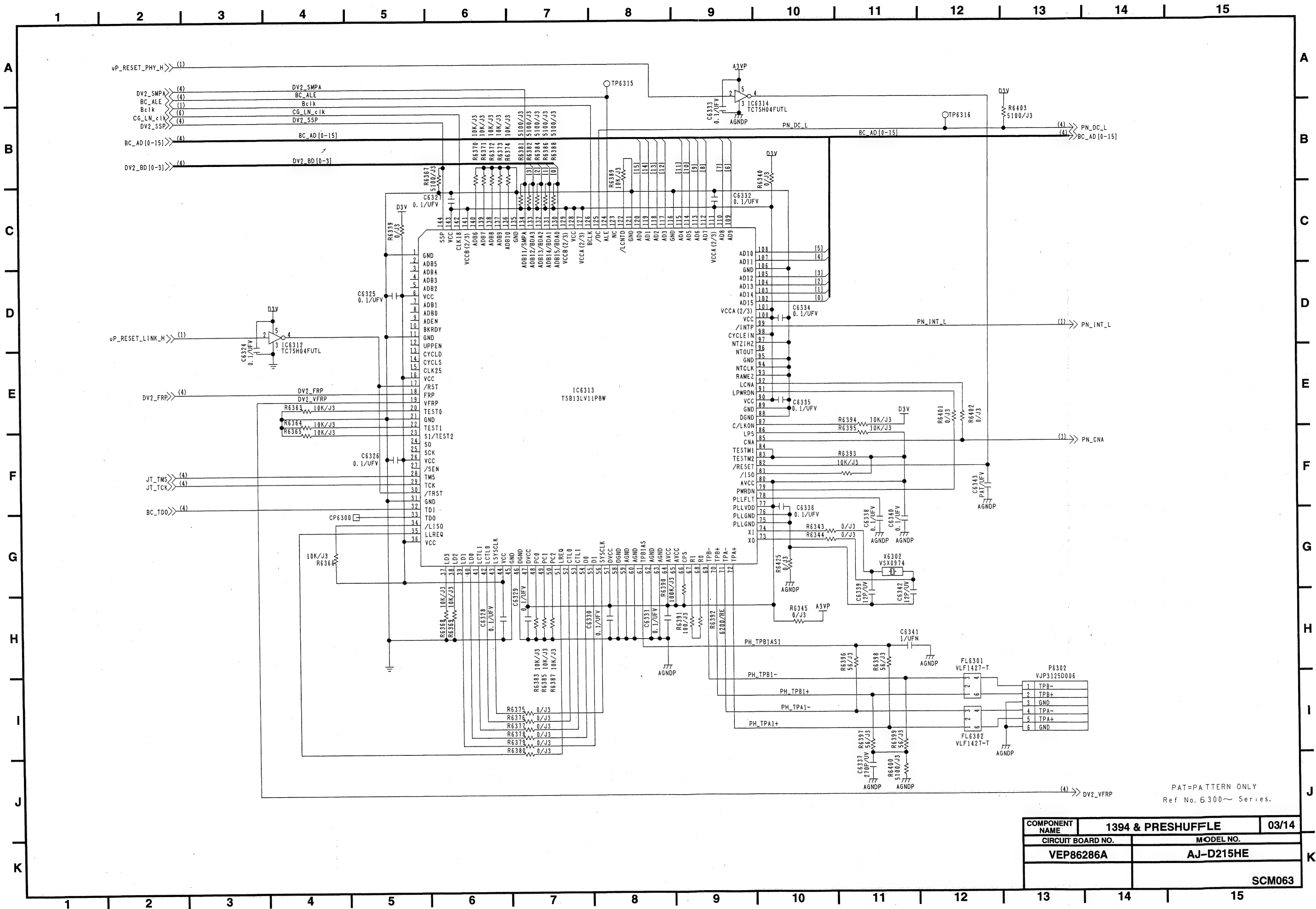


COMPONENT NAME	1394 & PRESHUFFLE	01/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
	SCM061	



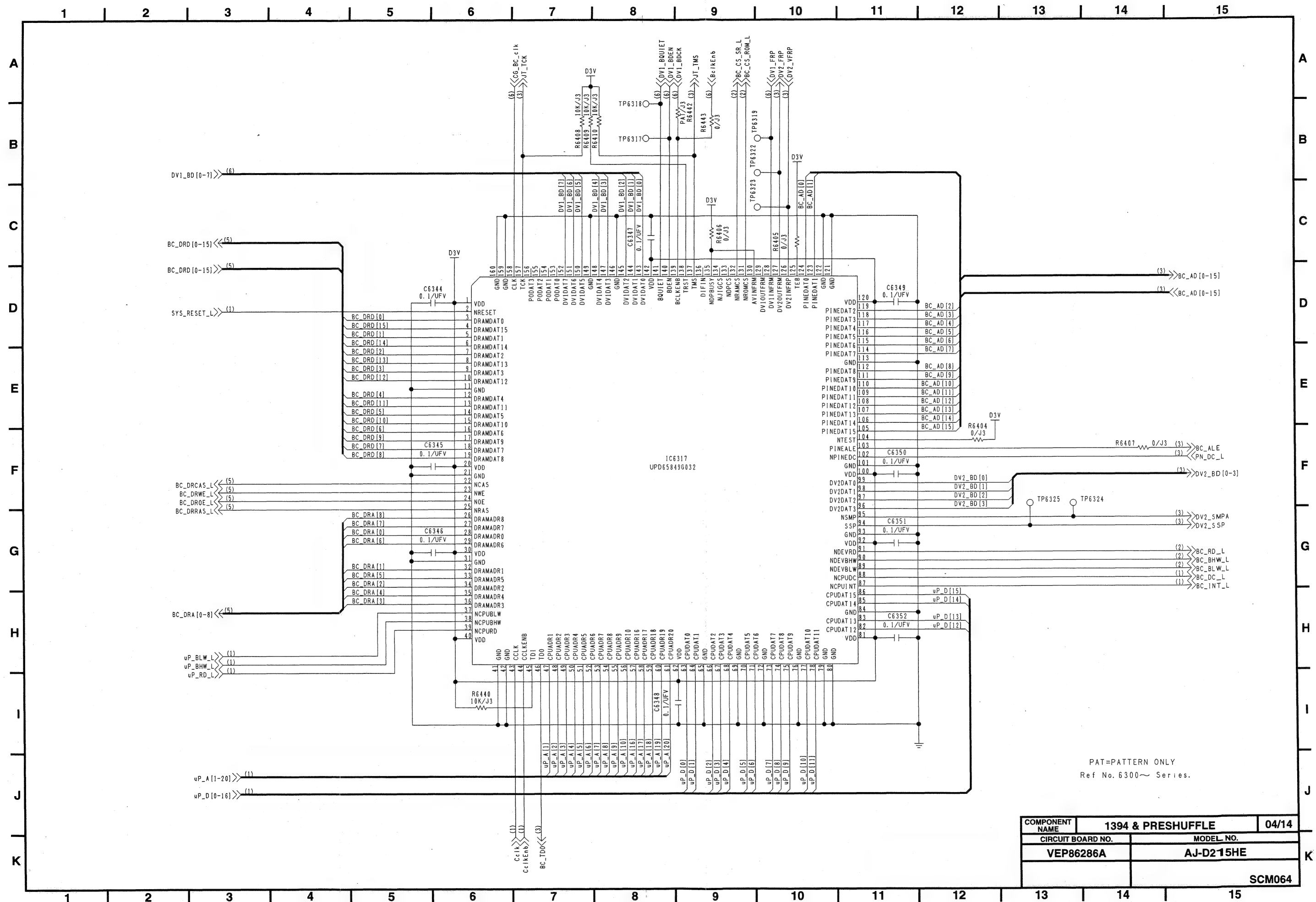




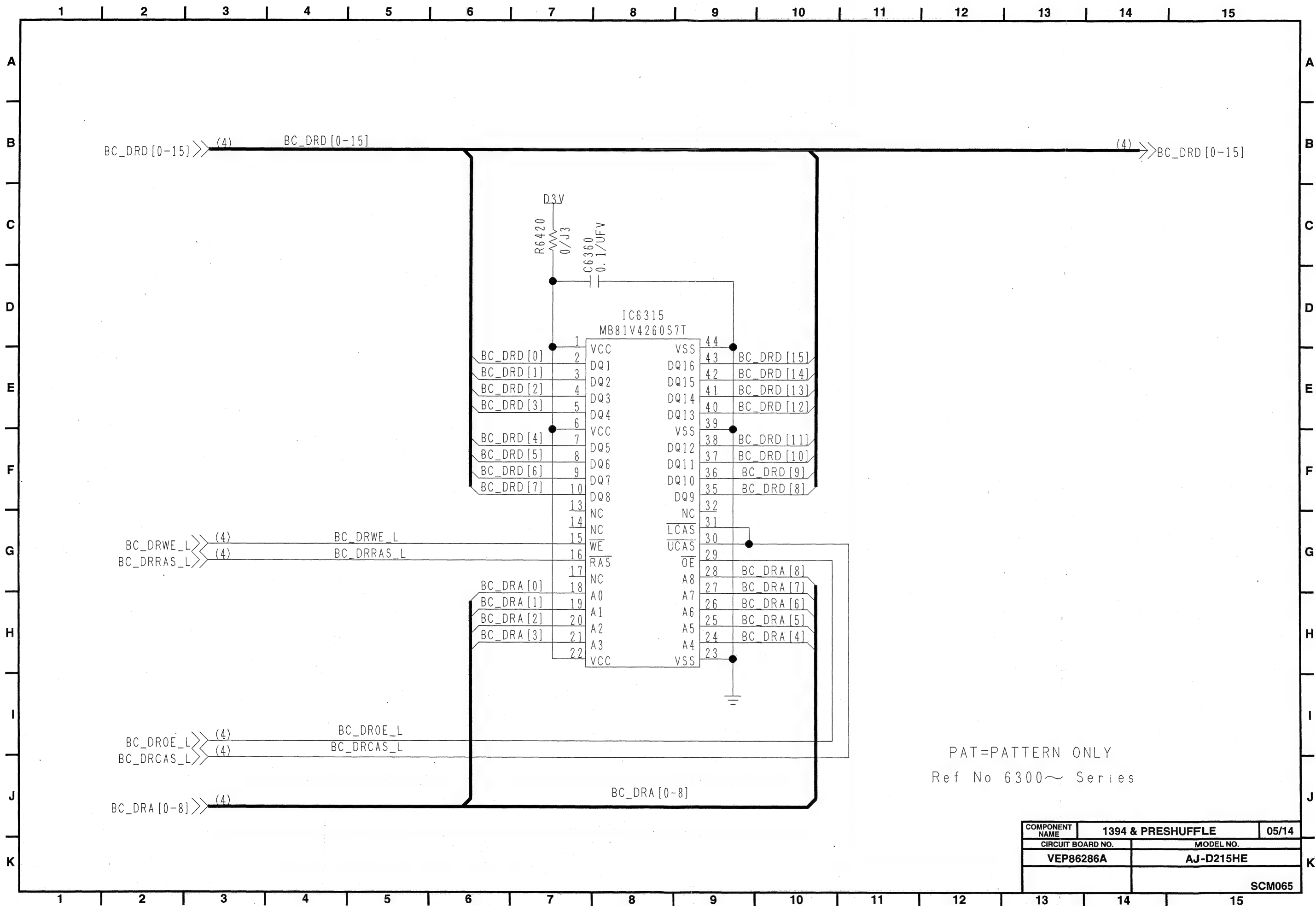


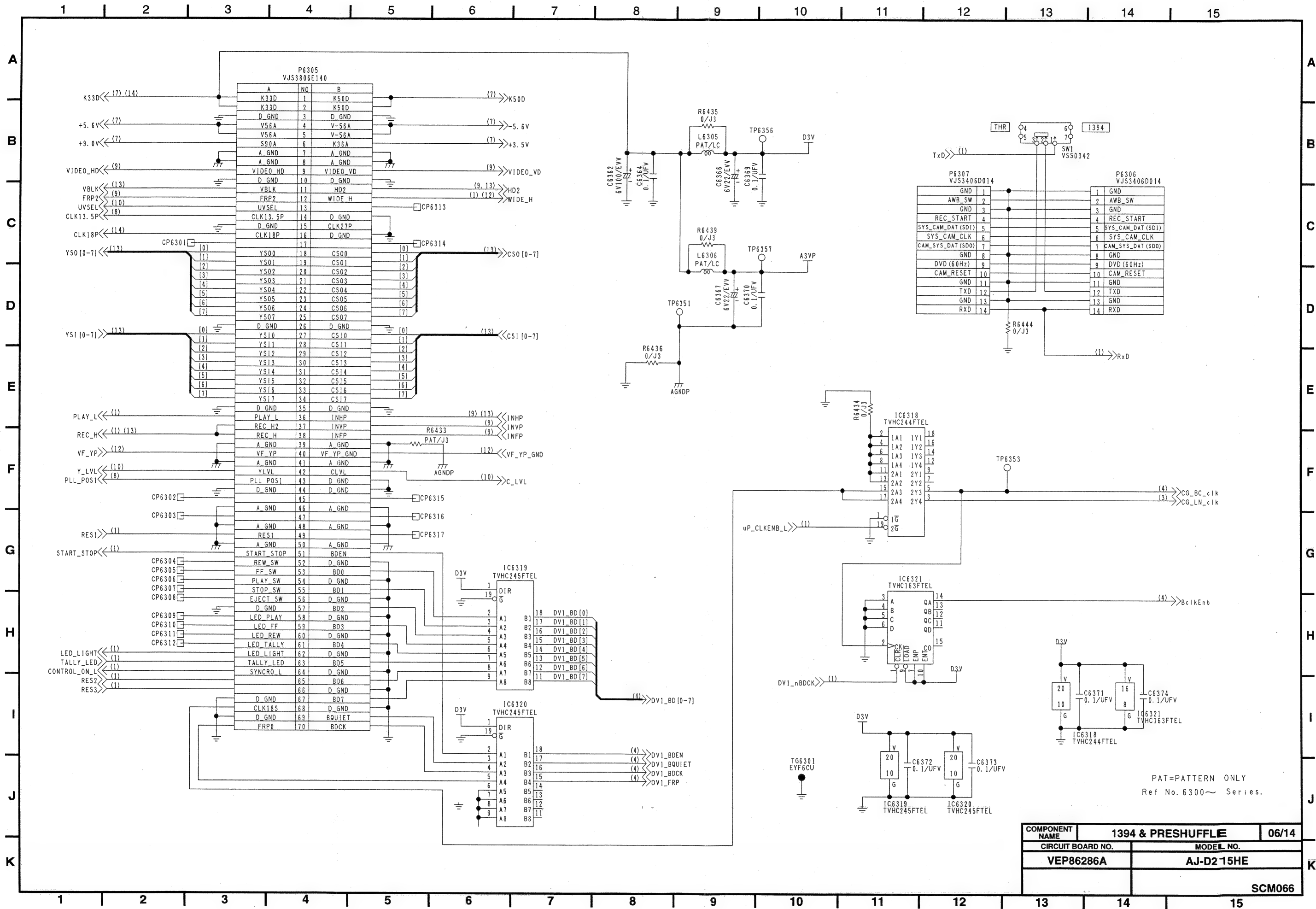
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Ref No. 6300~ Series.

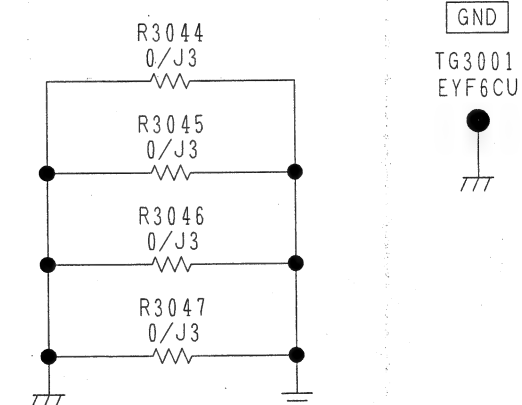
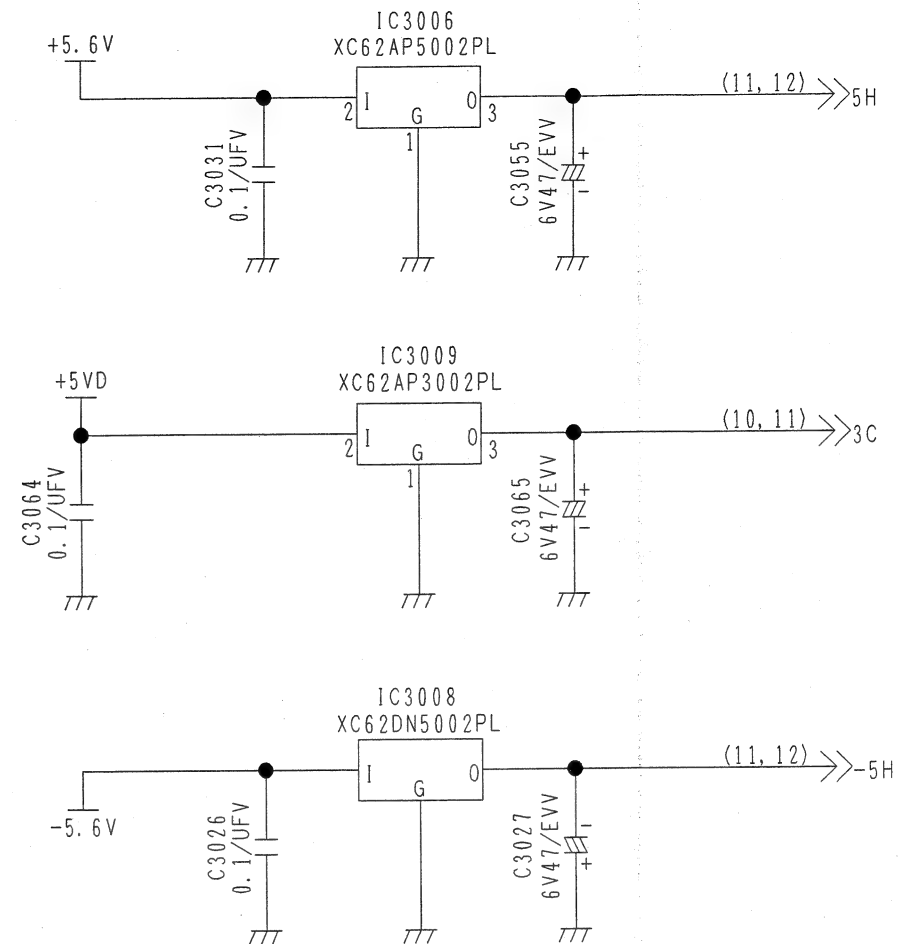
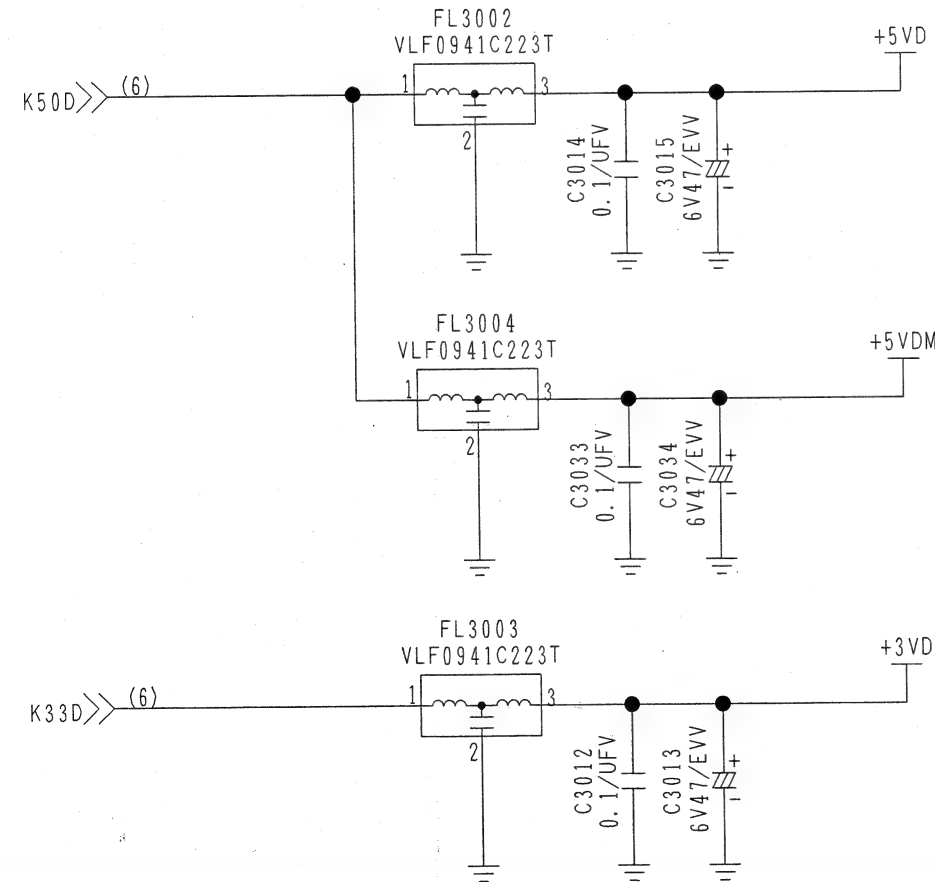
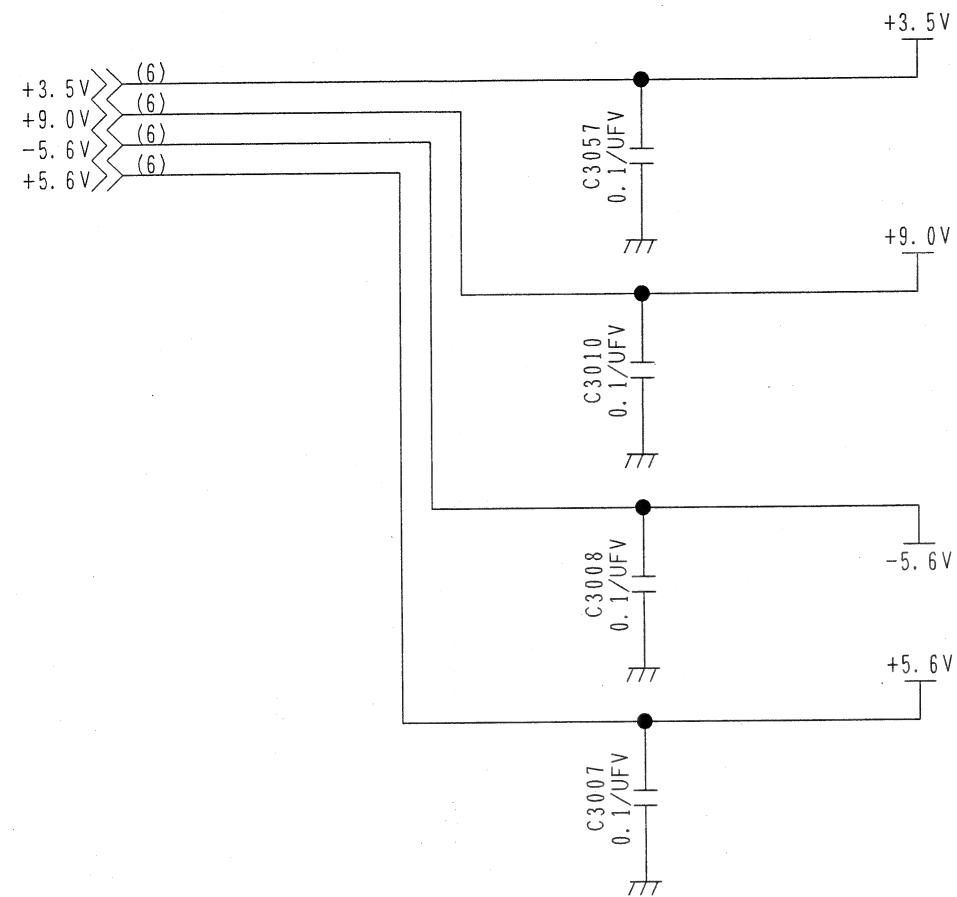
COMPONENT NAME	1394 & PRESUFFLE	03/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
SCM063		



COMPONENT NAME	1394 & PRES HuffLE	04/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
	SCM064	

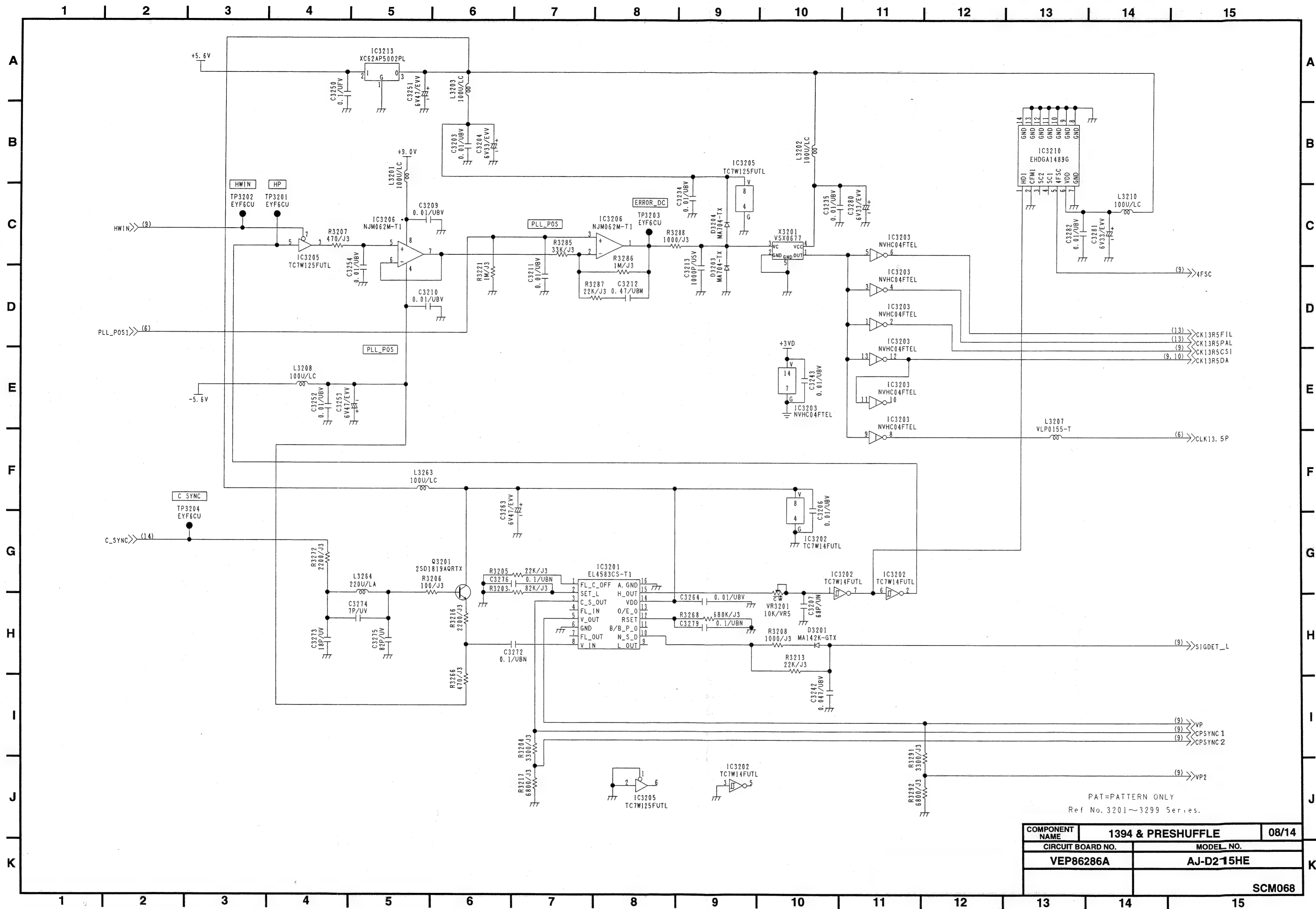






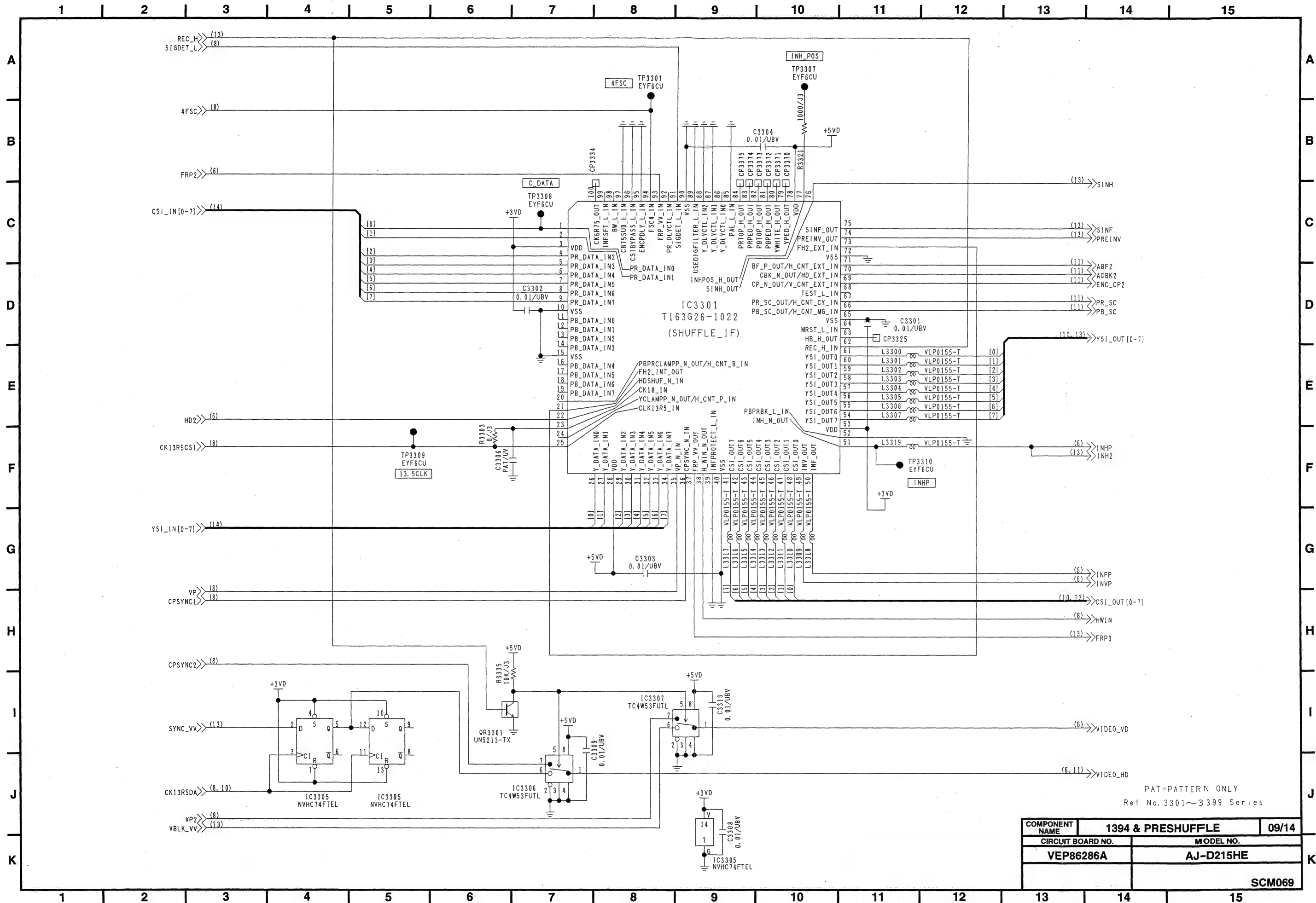
PAT=PATTERN ONLY  
Ref No. 3001~3099 Series.

COMPONENT NAME	1394 & PRESHUFFLE	07/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
	SCM067	

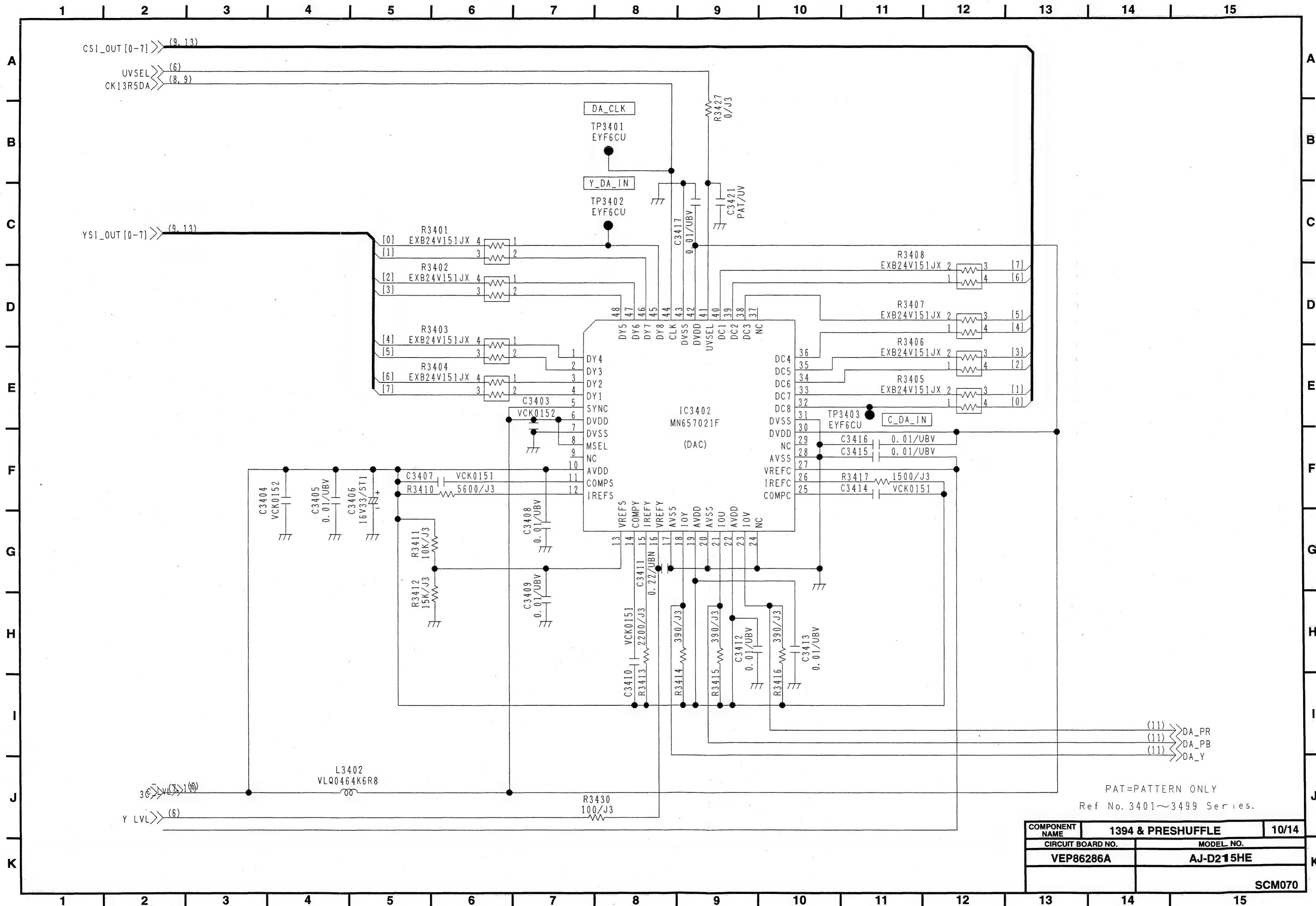


PAT=PATTERN ONLY  
Ref No. 3201~3299 Series.

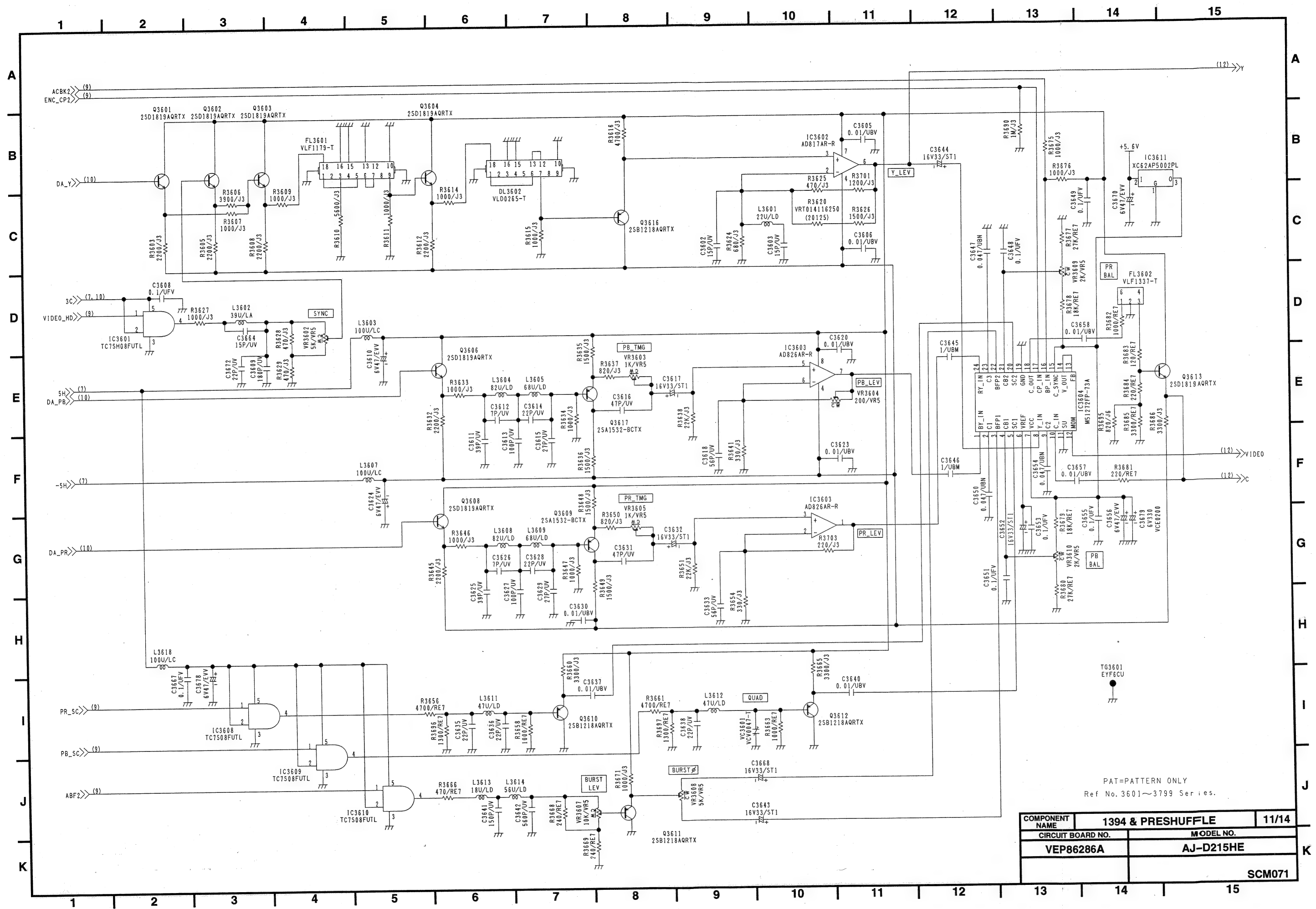
COMPONENT NAME	1394 & PRESCHUFFLE	08/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
SCM068		



PAT=PATTERN ONLY  
Ref No. 3301~3399 Series

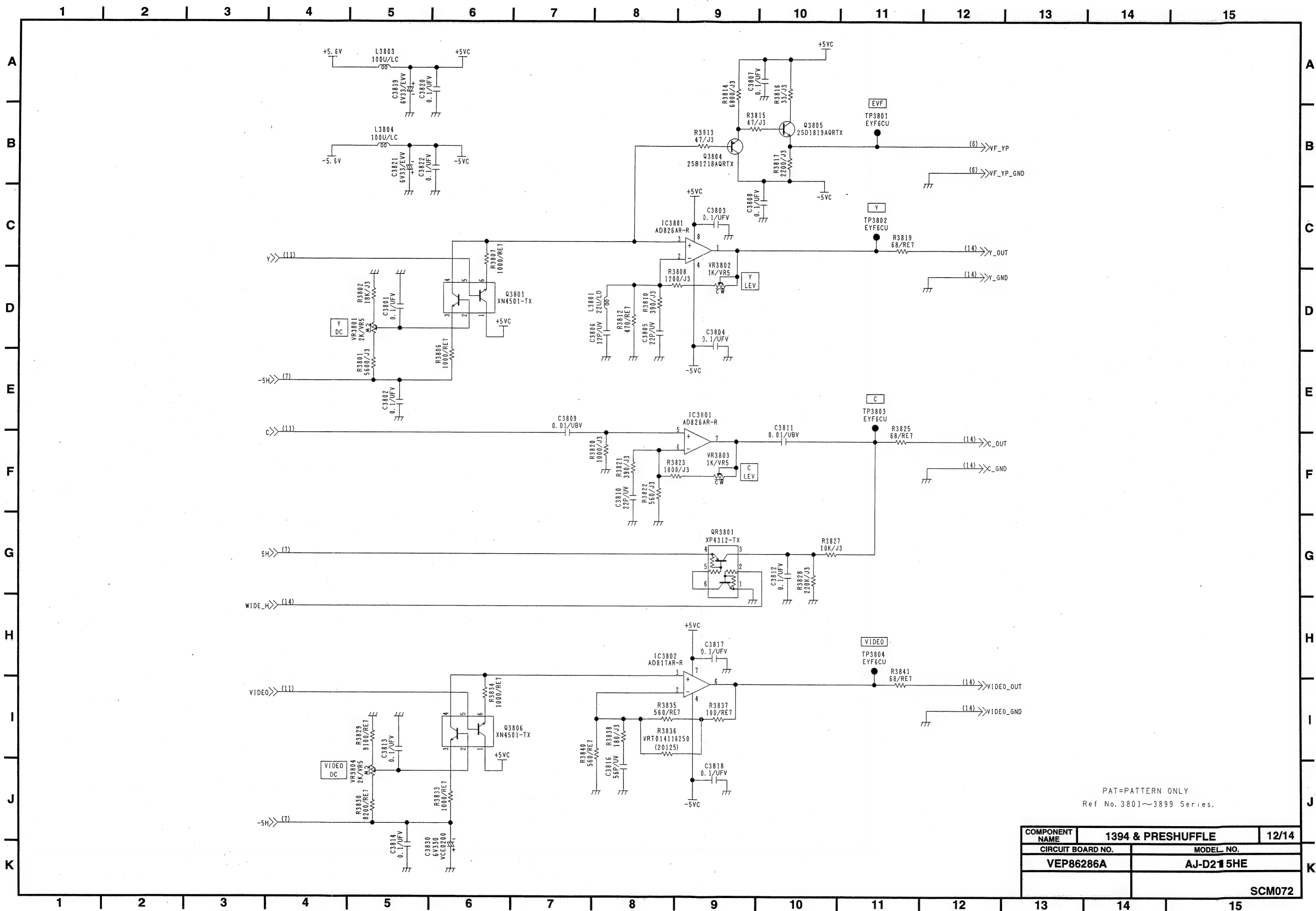






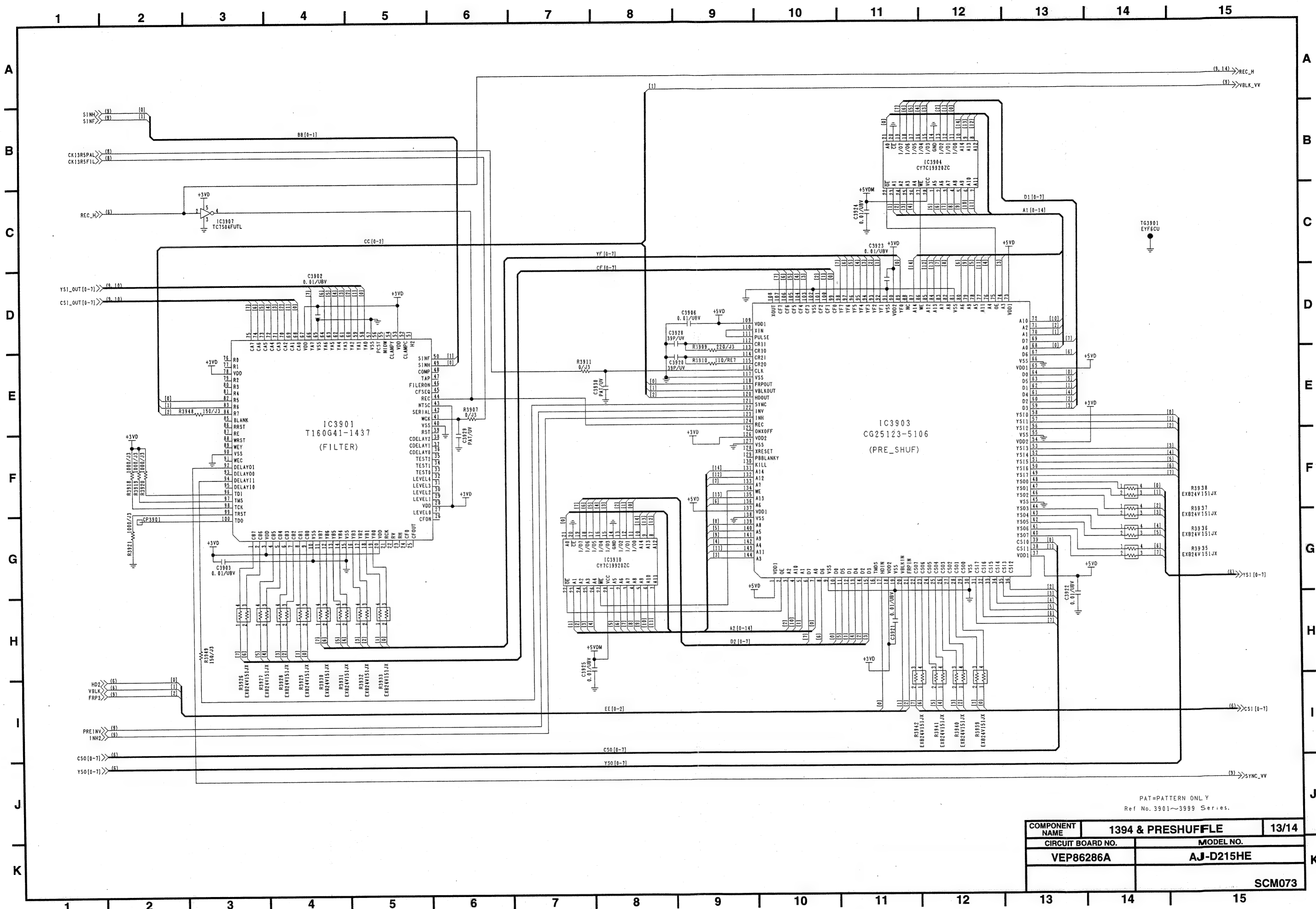
PAT= PATTERN ONLY  
Ref No. 3601~3799 Series.

COMPONENT NAME	1394 & PRESHUFFLE	11/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
	SCM071	

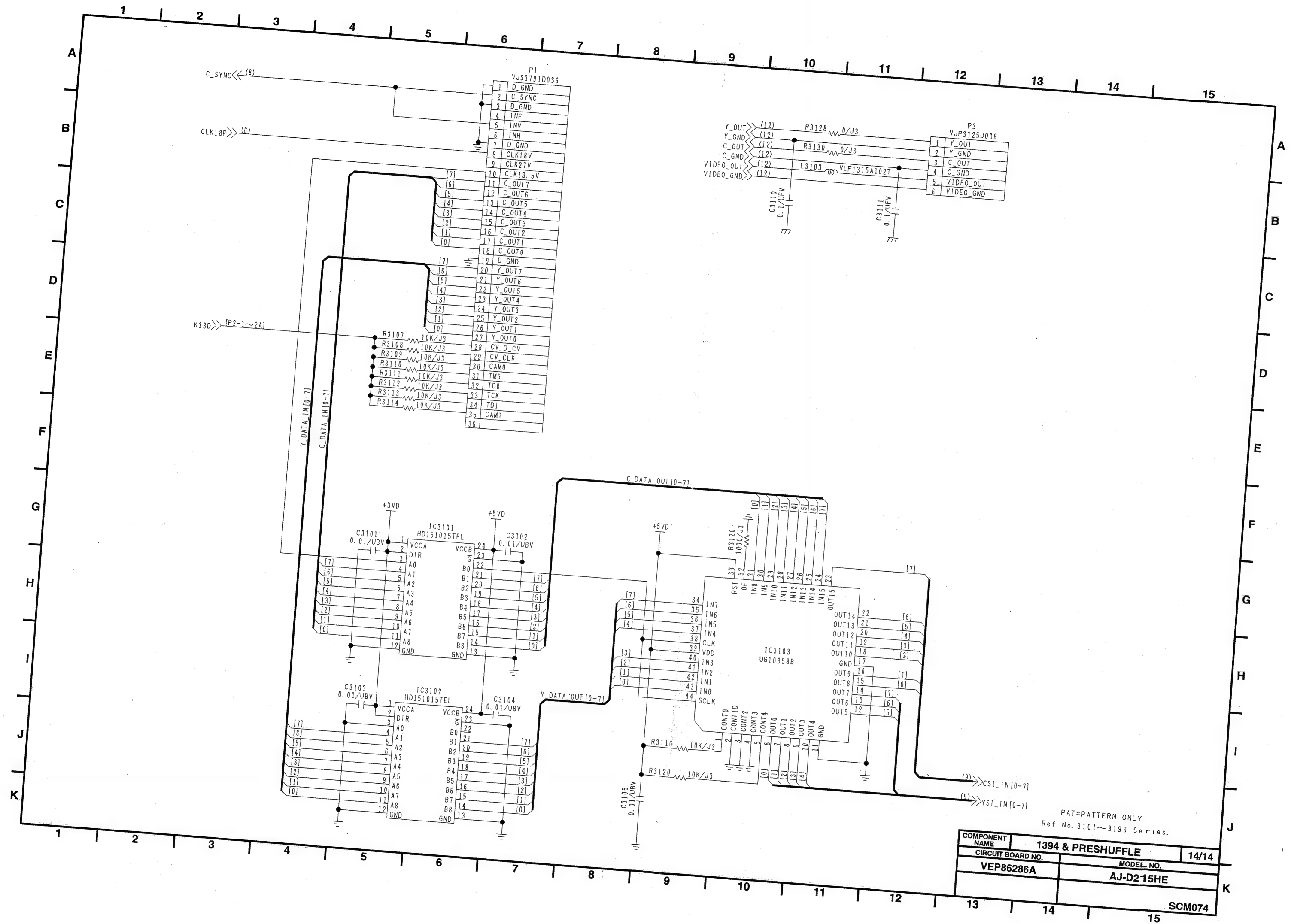


PAT=PATTERN ONLY  
Ref No. 3801~3899 Series.

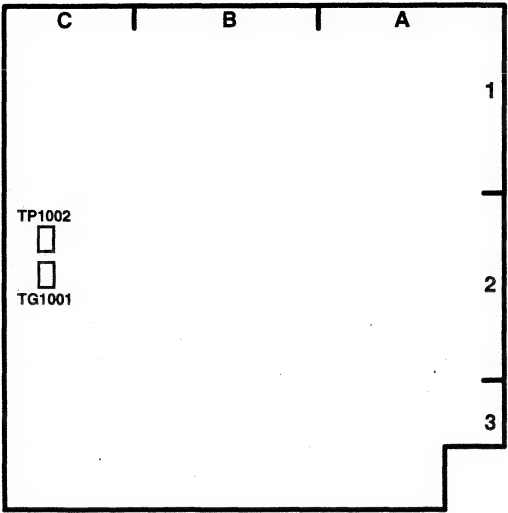
COMPONENT NAME	1394 & PRESUFFLE	12/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
	SCM072	



COMPONENT NAME	1394 & PRESHUFFLE	13/14
CIRCUIT BOARD NO.	MODEL NO.	
VEP86286A	AJ-D215HE	
		SCM073

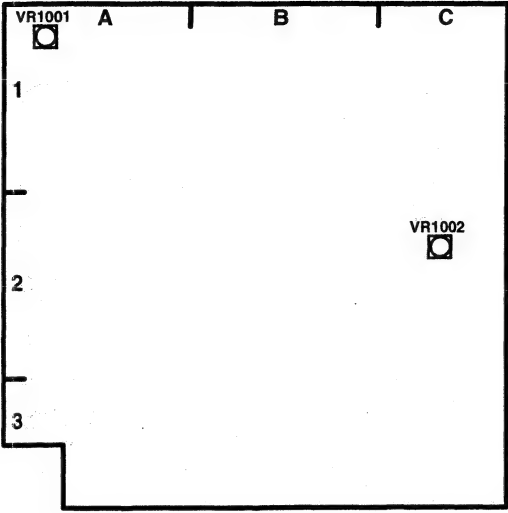


REAR JACK P.C.BOARD (FOR JAPAN ONLY:VEP84297A, FOR NTSC:VEP84297B, FOR PAL:VEP84297C )



FOIL SIDE

REF	LOC	REF	LOC
P1002	A2	Q1007	A1
P1003	B2	Q1008	B1
P1004	C1	Q1009	A1
P1005	A1	Q1010	A1
P1008	B2	QR1001	B1
P1009	A2	QR1002	B1
Q1001	B2	QR1003	B1
Q1002	B1	QR1004	B1
Q1003	B1	QR1005	B1
Q1004	A1	QR1006	B1
Q1005	B1	TG1001	C2
Q1006	B1	TP1002	C2

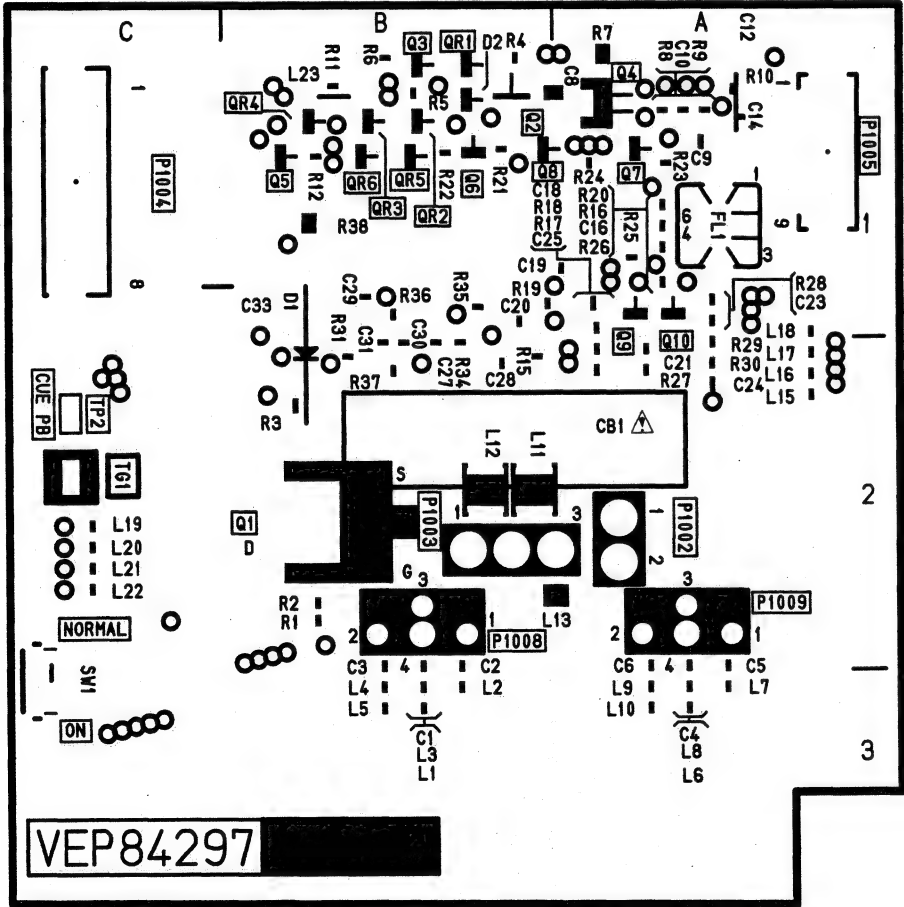


**警告** △印の部品は安全上重要な部品です。交換するときは、安全及び性能維持のため必ず指定の部品をご使用ください。

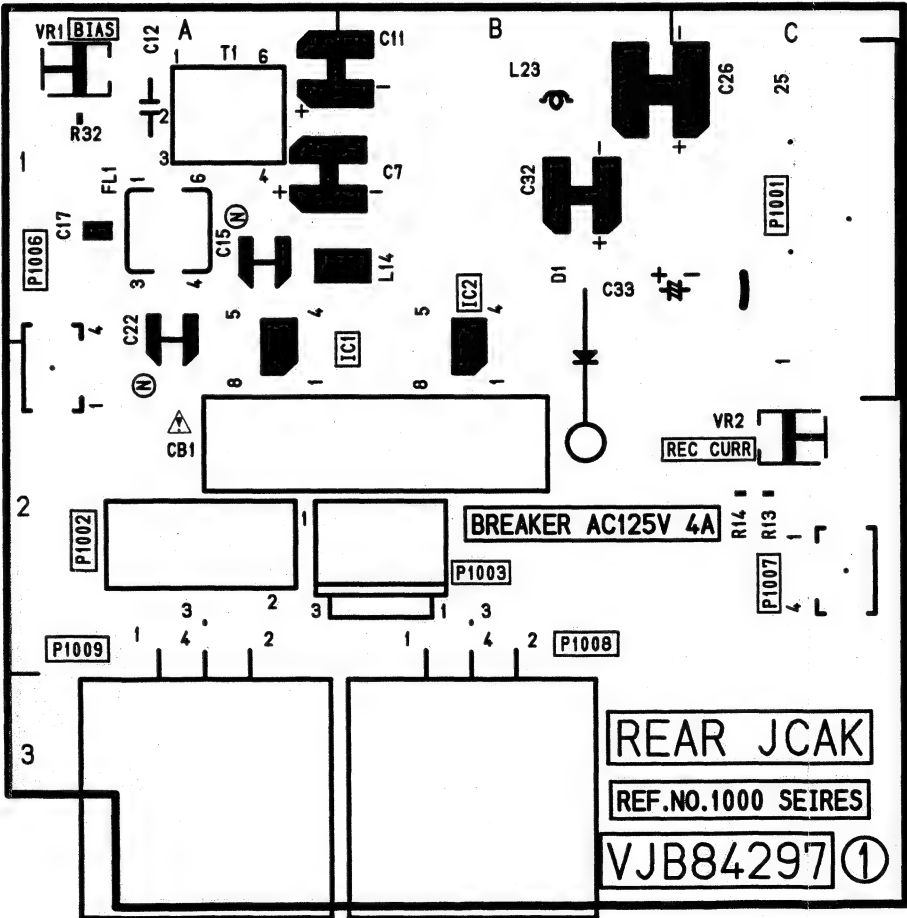
IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

COMPONENT SIDE

REF	LOC	REF	LOC
IC1001	A2	P1007	C2
IC1002	B2	VR1001	A1
P1001	C1	VR1002	C2
P1006	A2		



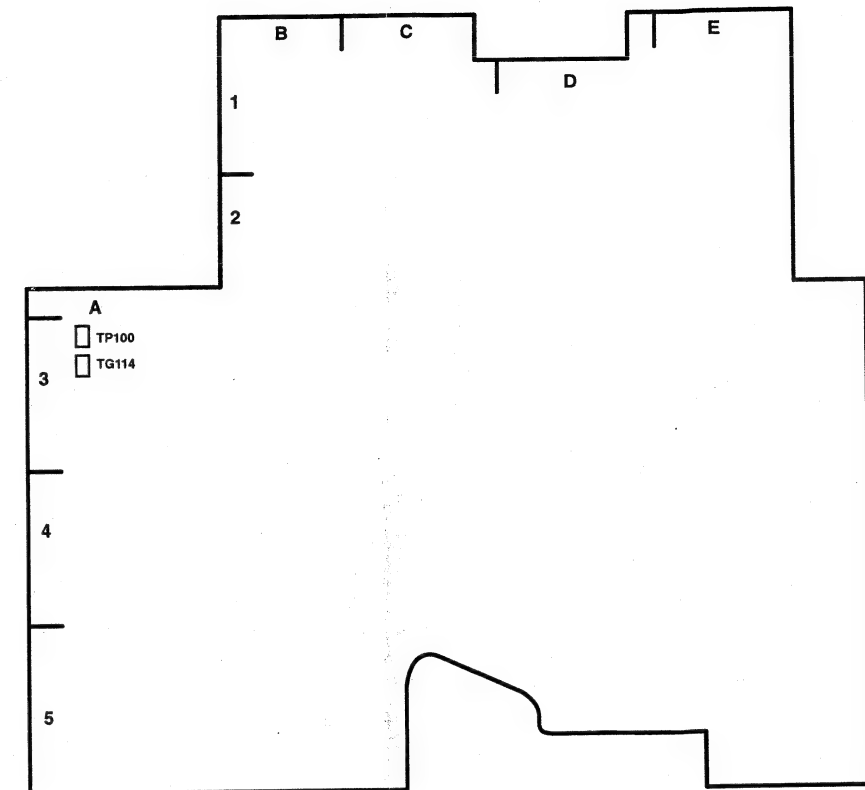
(FOIL SIDE)



(COMPONENT SIDE)

**CBA-2****CBA-2**

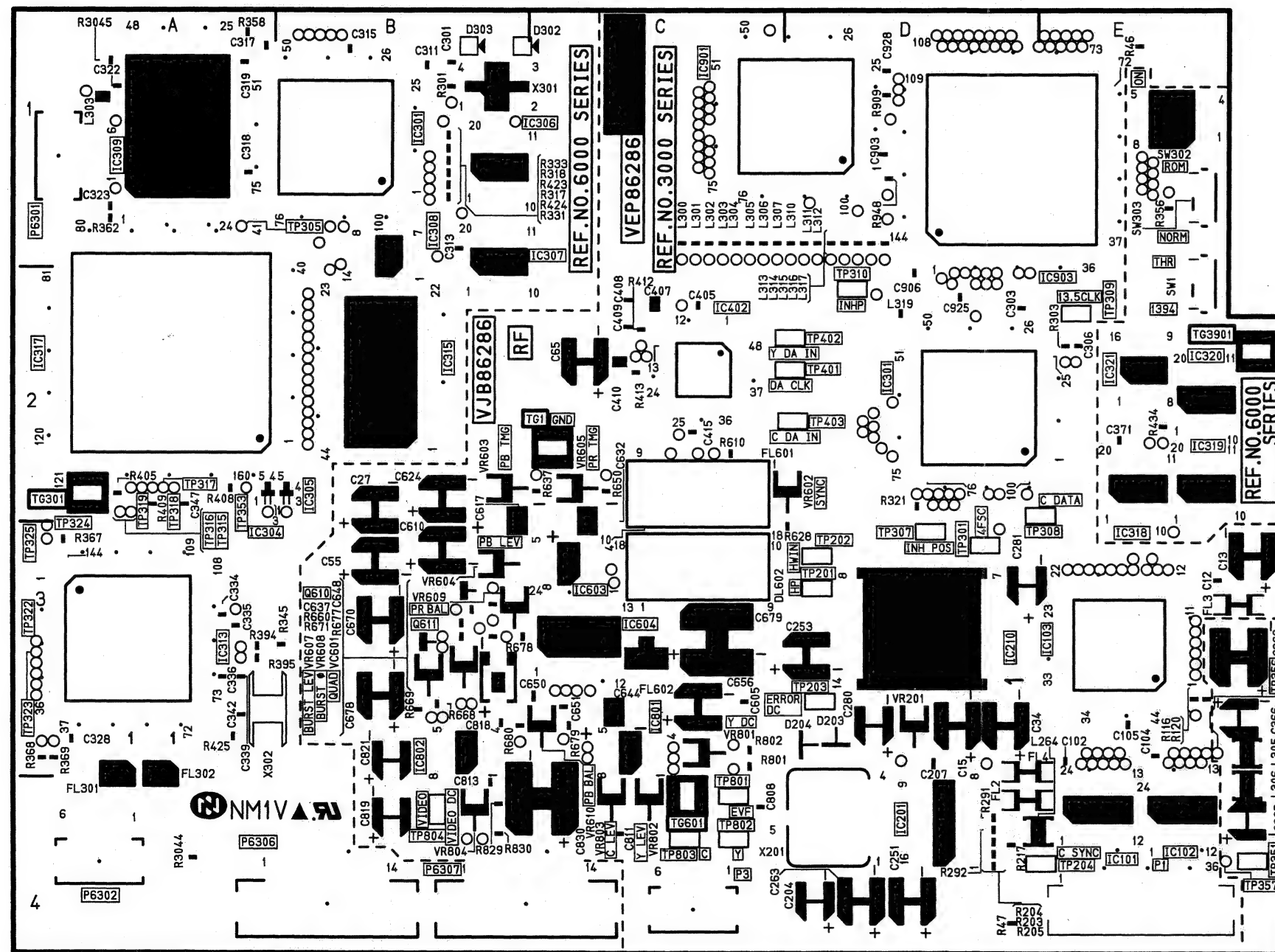


**CBA-3**

COMPONENT SIDE			
REF	LOC	REF	LOC
IC100	B3	P612	E5
IC101	A4	P613	C4
IC105	C4	P614	C1
IC200	D4	P615	D1
IC201	D4	P616	D5
IC211	D4	P618	C5
IC301	D2	P619	B5
IC302	B2	Q811	E4
IC303	E2	Q818	B3
IC406	A4	Q848	B3
IC501	D3	QR106	B5
IC701	B5	QR849	A4
IC807	B3	QR850	B3
IC808	A3	QR851	B3
IC809	A4	QR852	B3
P609	E4	TG114	A3
P610	E4	TP100	A3
P611	E5		

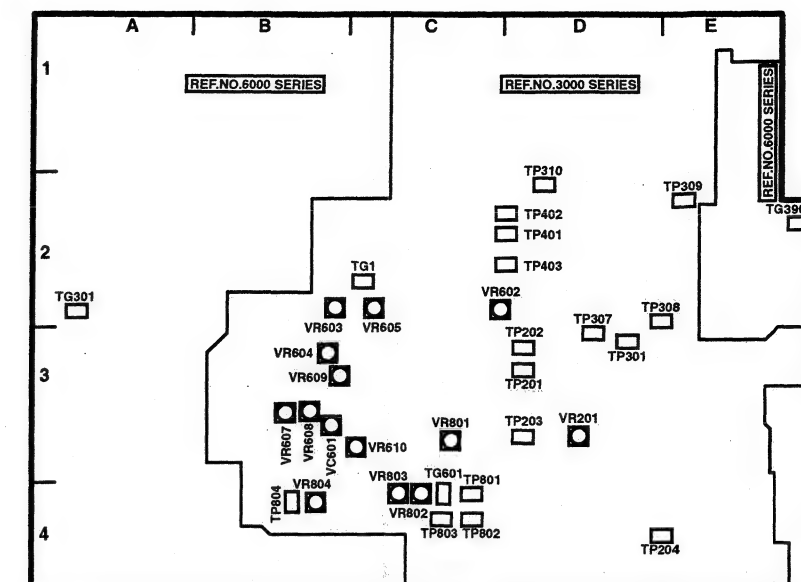
**CBA-4****CBA-4**





(COMPONENT SIDE)

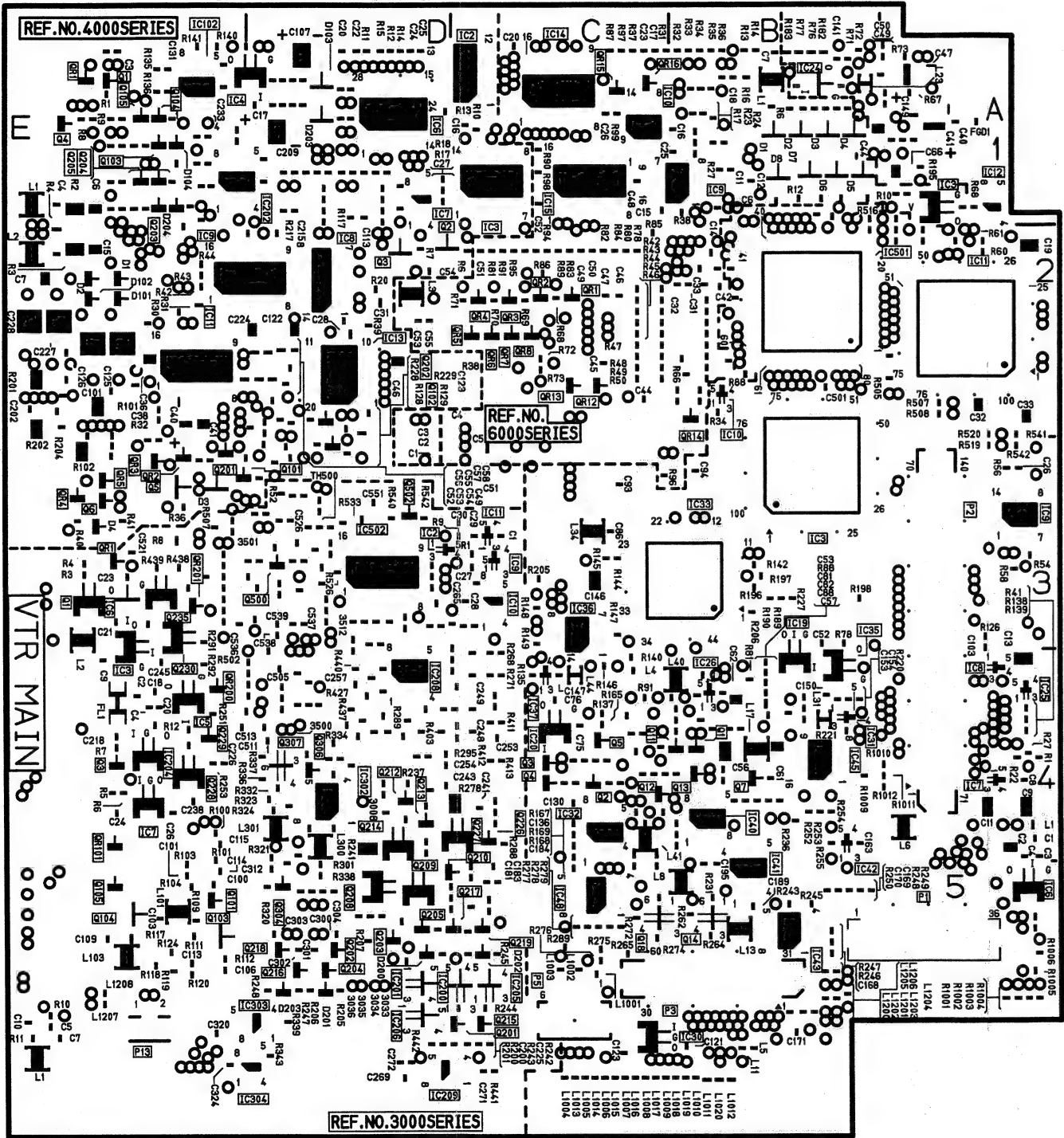
CBA-5



COMPONENT SIDE			
REF	LOC	REF	LOC
IC3101	E4	TG3001	C2
IC3102	E4	TG3601	C4
IC3103	E3	TG3901	E2
IC3201	D4	TG6301	A2
IC3210	D3	TP3201	D3
IC3301	D2	TP3202	D3
IC3402	C2	TP3203	D3
IC3603	C3	TP3204	E4
IC3604	C3	TP3301	D3
IC3801	C3	TP3307	D3
IC3802	B3	TP3308	E2
IC3901	D1	TP3309	E2
IC3903	D1	TP3310	D2
IC6301	B1	TP3401	D2
IC6304	A2	TP3402	D2
IC6305	B2	TP3403	D2
IC6306	B1	TP3801	C4
IC6307	B1	TP3802	C4
IC6308	B1	TP3803	C4
IC6309	A1	TP3804	B4
IC6313	A3	VC3601	B3
IC6315	B2	VR3201	D3
IC6317	A2	VR3602	D2
IC6318	E2	VR3603	B2
IC6319	E2	VR3604	B3
IC6320	E2	VR3605	C2
IC6321	E2	VR3607	B3
P3001	E4	VR3608	B3
P3003	C4	VR3609	B3
P6301	A1	VR3610	C3
P6302	A4	VR3801	C3
P6306	B4	VR3802	C4
P6307	B4	VR3803	C4
Q3610	B3	VR3804	B4
Q3611	B3		

CBA-5

VTR MAIN P.C.BOARD (FOR NTSC:VEP83356D, FOR PAL:VEP83356E)

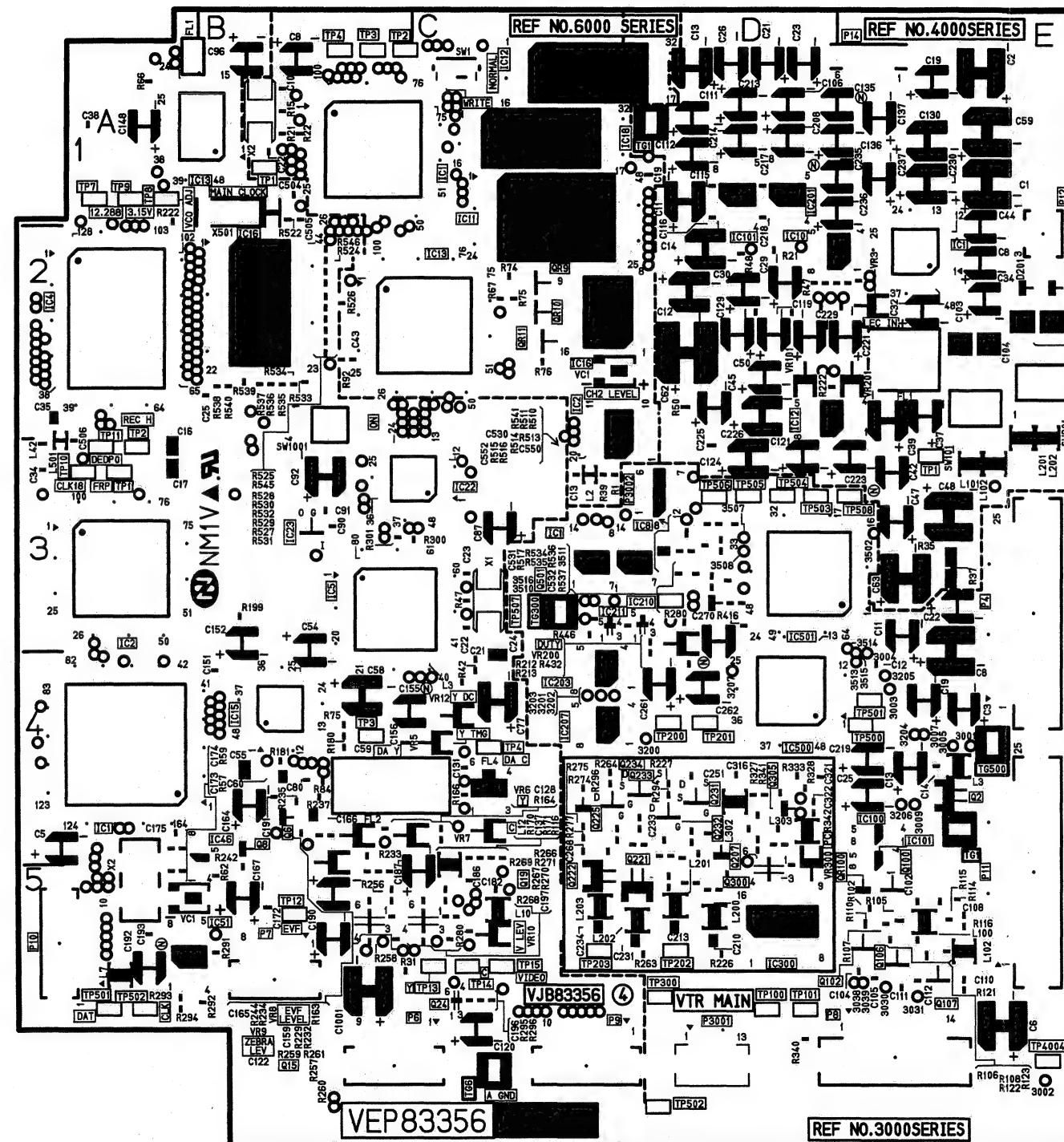


(FOIL SIDE)

CBA-6

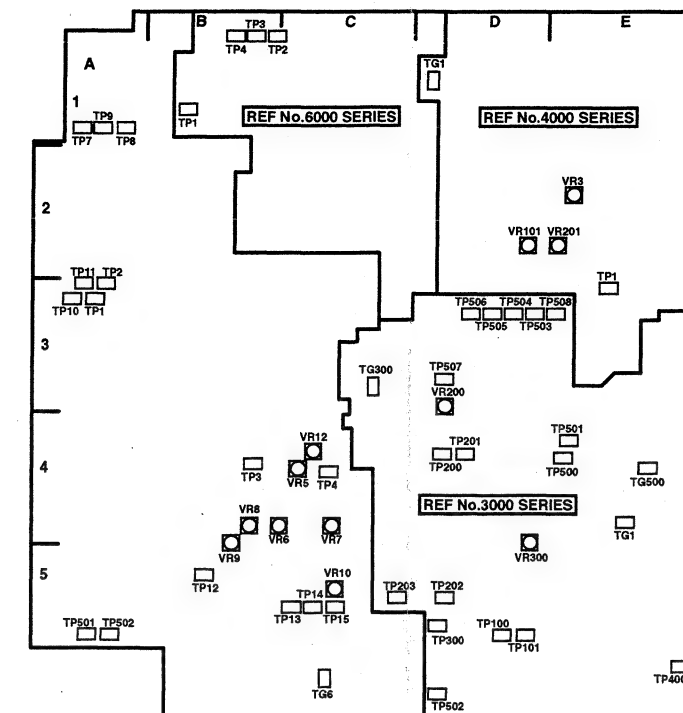
FOIL SIDE			
REF	LOC	REF	LOC
IC3	B3	Q14	B5
IC6	A5	Q18	C5
IC7	A4	Q3001	E3
IC8	A4	Q3003	E4
IC9	A3	Q3101	E5
IC10	B2	Q3103	E5
IC11	A2	Q3104	E5
IC12	A1	Q3105	E5
IC19	B4	Q3201	D5
IC20	C4	Q3202	D5
IC24	B1	Q3203	D5
IC25	A4	Q3204	D5
IC26	B4	Q3205	D5
IC30	C5	Q3208	D5
IC31	B4	Q3209	D5
IC32	C4	Q3210	D5
IC33	B3	Q3212	D4
IC36	C3	Q3213	D4
IC37	C4	Q3214	D4
IC40	B4	Q3215	C5
IC41	B5	Q3216	D5
IC42	B4	Q3217	D5
IC43	B5	Q3218	D5
IC45	B4	Q3219	C5
IC48	C5	Q3226	C4
IC501	B2	Q3227	D4
IC3002	D3	Q3228	E4
IC3003	E4	Q3229	E4
IC3005	E4	Q3230	E3
IC3006	E3	Q3235	E3
IC3007	E4	Q3304	D5
IC3009	C3	Q3306	D4
IC3010	C3	Q3307	D4
IC3011	C3	Q3500	D3
IC3200	D5	Q3502	D3
IC3201	D5	Q4001	E1
IC3204	E4	Q4002	D2
IC3205	C5	Q4003	D2
IC3206	D5	Q4004	E1
IC3208	D4	Q4005	E3
IC3209	D5	Q4006	E3
IC3302	D4	Q4101	E3
IC3303	D5	Q4102	D3
IC3304	E5	Q4103	E1
IC3502	D3	Q4104	E1
IC4002	C1	Q4105	E1
IC4003	C1	Q4201	E3
IC4004	E1	Q4202	D2
IC4006	D1	Q4203	E1
IC4007	D1	Q4204	E1
IC4008	D2	Q4205	E1
IC4009	E2	QR3001	E3
IC4011	E2	QR3101	E4
IC4013	D2	QR3200	E4
IC4102	E1	QR3201	E3
IC4202	E1	QR4001	E1
IC6003	A1	QR4002	E3
IC6009	B1	QR4003	E3
IC6010	C1	QR4004	E3
IC6014	C1	QR4005	E3
IC6015	C1	QR6001	C2
P1	A5	QR6002	C2
P2	A3	QR6003	C2
P3	B5	QR6004	C2
P5	C5	QR6005	C2

CBA-6



(COMPONENT SIDE)

CBA-7

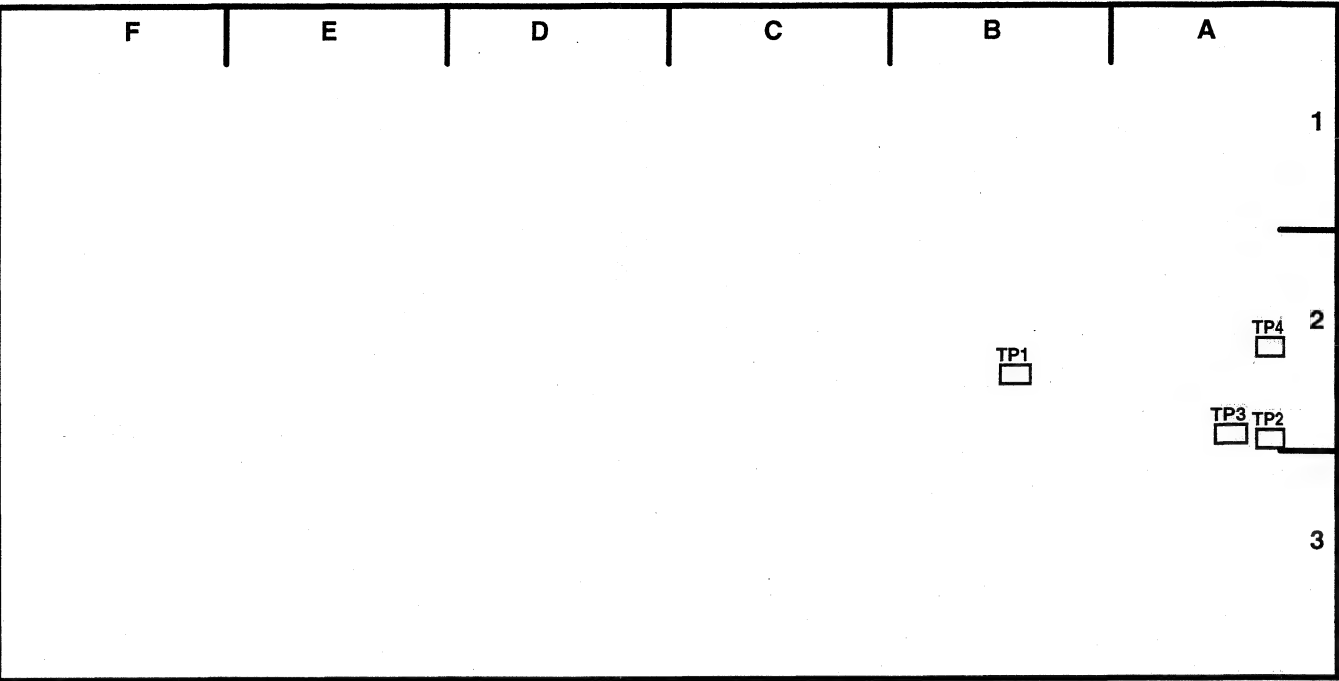


COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC
IC1	A4	P11	E5	TP11	A3
IC2	A3	P12	E2	TP12	B5
IC4	A2	P14	E1	TP13	C5
IC5	B3	P3001	D5	TP14	C5
IC13	B1	P3002	D3	TP15	C5
IC15	B4	Q6	B4	TP501	A5
IC16	B2	Q8	B4	TP502	A5
IC22	C3	Q15	B5	TP3100	D5
IC23	B3	Q19	C5	TP3101	D5
IC46	A4	Q24	C5	TP3200	D4
IC51	A5	Q3002	E4	TP3201	D4
IC3001	C3	Q3100	E5	TP3202	D5
IC3008	D3	Q3102	E5	TP3203	C5
IC3100	E4	Q3106	E5	TP3300	D5
IC3101	E5	Q3107	E5	TP3500	E4
IC3203	C4	Q3207	D4	TP3501	E4
IC3210	D3	Q3221	D5	TP3502	D5
IC3211	C3	Q3222	C5	TP3503	D3
IC3300	D5	Q3225	C4	TP3504	D3
IC3500	D4	Q3300	D5	TP3505	D3
IC3501	D3	Q3305	D4	TP3506	D3
IC4001	E2	Q3501	D3	TP3507	D3
IC4010	E2	QR3100	E5	TP3508	E3
IC4012	D2	QR6009	C2	TP4001	E3
IC4101	D1	QR6010	C2	TP4004	E5
IC4201	D1	QR6011	C2	TP6001	B1
IC6001	B1	TG6	C5	TP6002	B1
IC6002	C3	TG3001	E4	TP6003	B1
IC6011	C1	TG3300	C3	TP6004	B1
IC6012	C1	TG3500	E4	VC6001	C2
IC6013	C2	TG4001	D1	VR5	C4
IC6016	C2	TP1	A3	VR6	C4
IC6018	C1	TP2	A3	VR9	B5
P4	E3	TP3	B4	VR10	C5
P6	B5	TP4	C4	VR3200	D3
P7	B5	TP7	A1	VR4003	E2
P8	E5	TP8	A1	VR4101	D2
P9	C5	TP9	A1	VR4201	E2
P10	A5	TP10	A3		

CBA-7

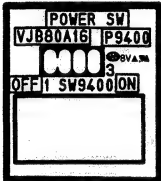
R SIDE P.C.BOARD (VEP86264A)



FOIL SIDE

REF	LOC	REF	LOC
IC6501	C2	QR6502	B2
IC6502	D2	QR6503	B4
IC6503	B3	QR6504	A3
IC6505	C3	QR6505	A3
IC6506	C3	QR6508	B4
IC6507	D3	QR6509	B4
IC6508	D3	TP6501	B2
IC6509	E3	TP6502	A2
Q6501	A2	TP6503	A2
Q6502	A2	TP6504	A2
QR6501	B2		

POWER SW P.C.BOARD (VEP80A16A)



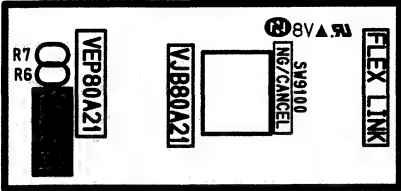
(FOIL SIDE)

MODE CHE CK P.C. BOARD (VEP80A17A)



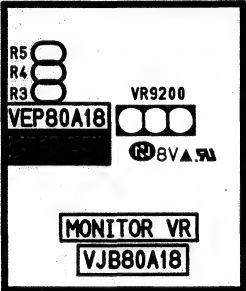
(FOIL SIDE)

FLEX RING P.C. BOARD (VEP80A21A)

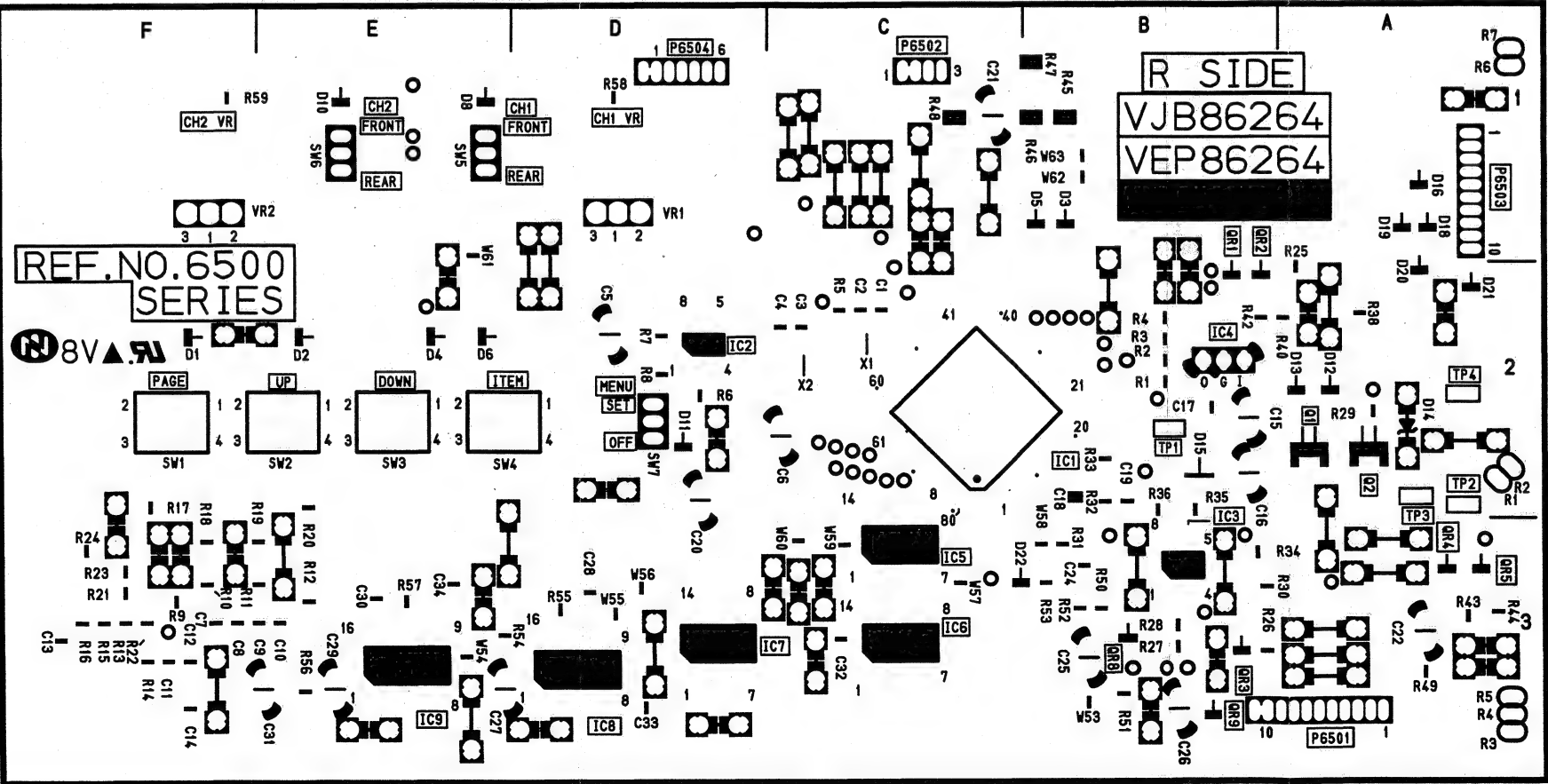


(FOIL SIDE)

MONITOR VR P.C. BOARD (VEP80A18A)

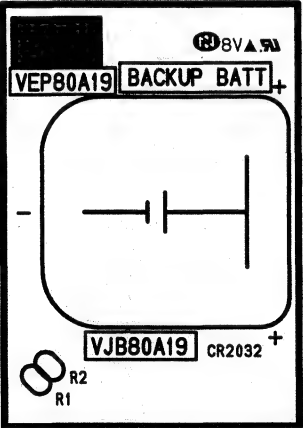


(FOIL SIDE)



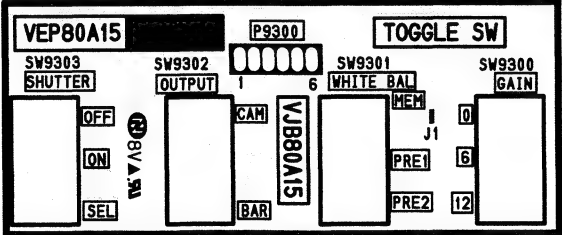
(FOIL SIDE)

BACK UP BATTERY P.C. BOARD (VEP80A19A)



(FOIL SIDE)

TOGGLE SW P.C. BOARD (VEP80A15A)



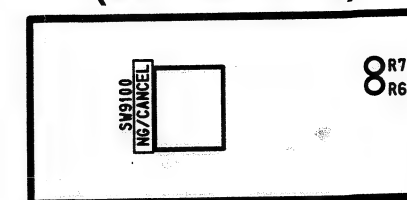
(FOIL SIDE)



# MODE CHECK P.C.BOARD (VEP80A17A)

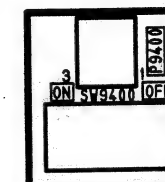


# FLEX RING P.C.BOARD (VEP80A21A)



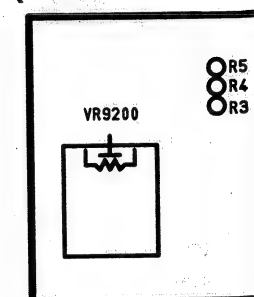
(COMPONENT SIDE)

# POWER SW P.C.BOARD (VEP80A16A)



(COMPONENT SIDE)

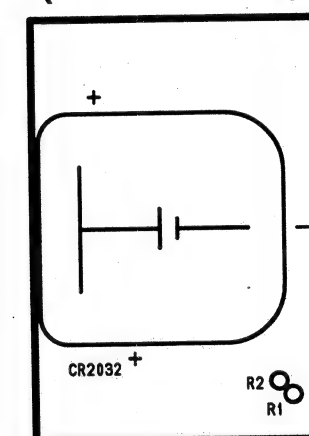
# MONITOR VR P.C.BOARD (VEP80A18A)



(COMPONENT SIDE)

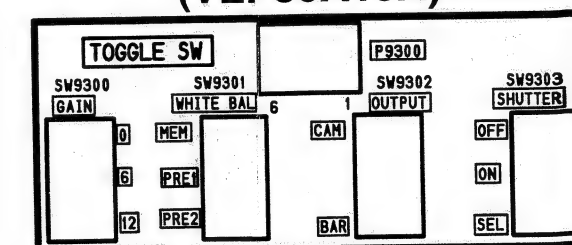
COMPONENT SIDE			
REF	LOC	REF	LOC
IC6504	B2	P6504	C1
P6501	A3	VR6501	D1
P6502	C1	VR6502	F1
P6503	A1		

# BACK UP BATTERY P.C.BOARD (VEP80A19A)

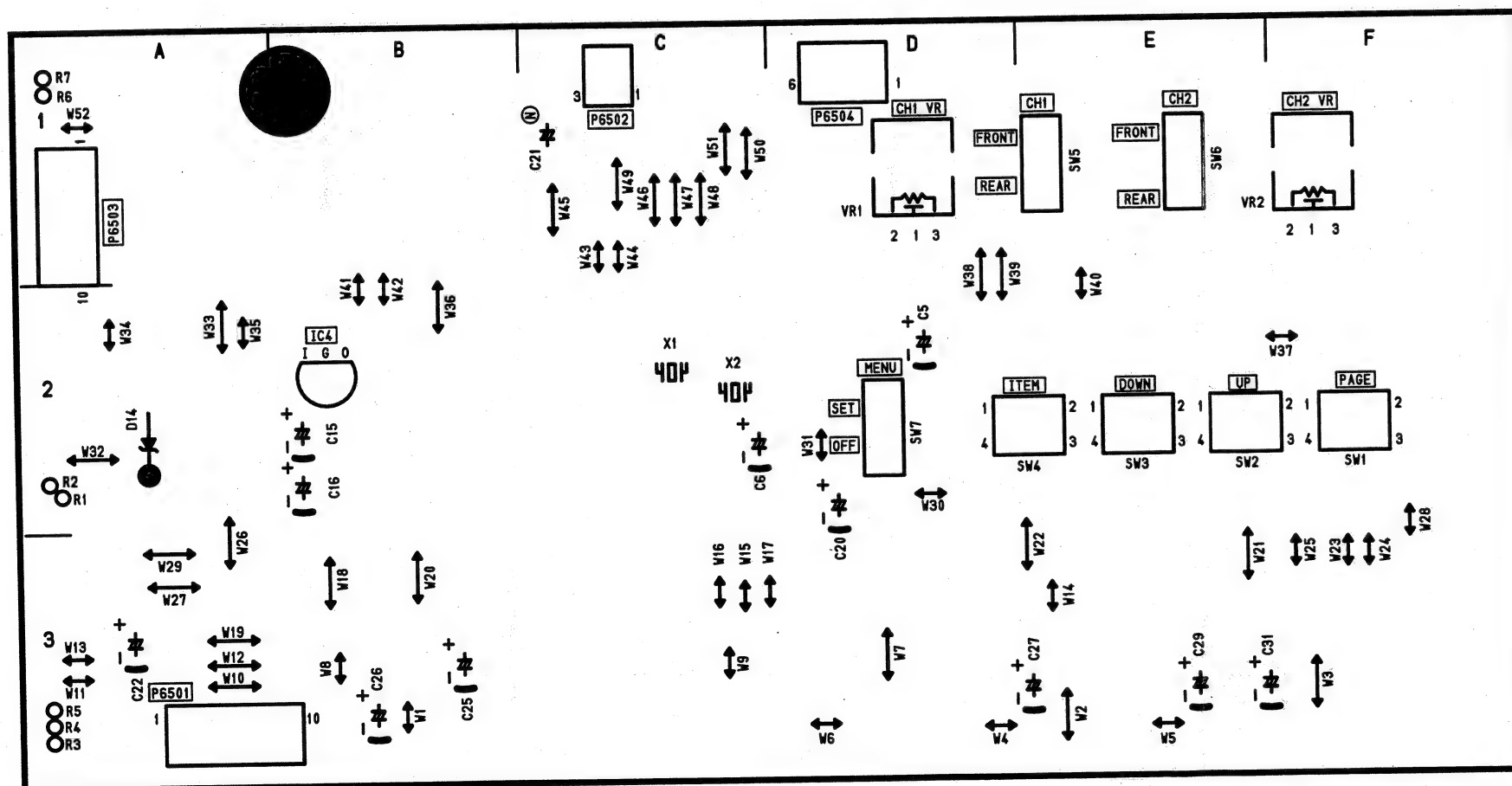


(COMPONENT SIDE)

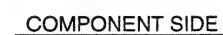
# TOGGLE SW P.C.BOARD (VEP80A15A)



(COMPONENT SIDE)



(COMPONENT SIDE)

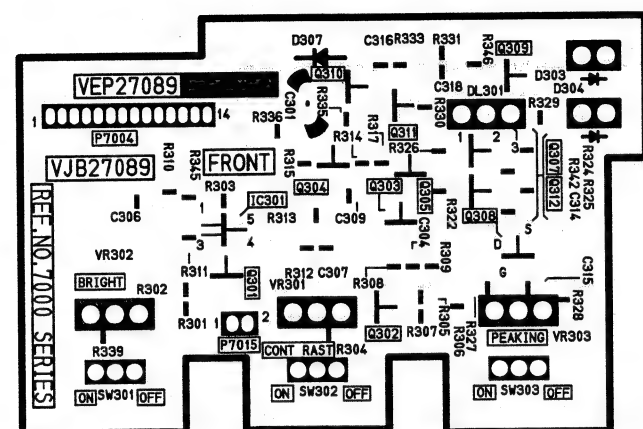
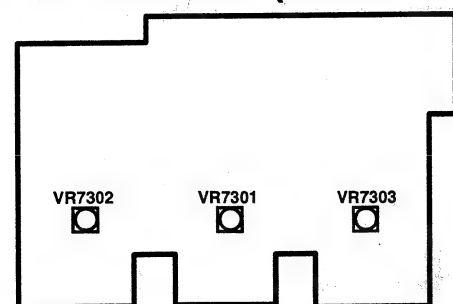
**CBA-10**

CONFIDENTIAL SIDE			
REF	LOC	REF	LOC
IC1001	A2	TP1007	B3
IC1002	B2	TP1008	B3
IC1003	C1	TP1009	D1
IC1004	C2	TP1101	E3
P1001	C3	TP1102	E3
P1002	E2	TP1103	E3
P1003	E1	TP1104	D3
Q1101	D2	TP1105	D3
Q1102	D2	TP1106	D3
TP1001	D1	VR1001	A3
TP1002	E3	VR1002	B3
TP1003	A3	VR1003	A3
TP1004	A3	VR1004	B3
TP1005	B3	VR1005	B3
TP1006	B3	VR1006	C3

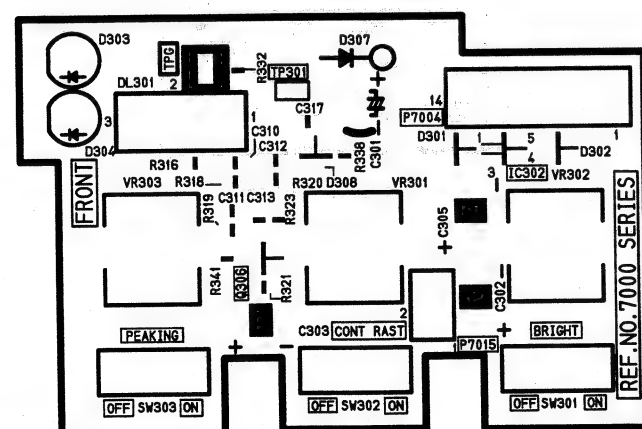
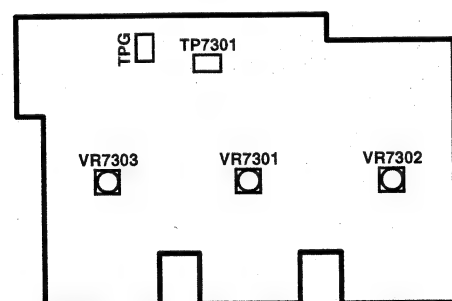
FOIL SIDE

REF	LOC	REF	LOC
Q1001	B1	Q1013	C1
Q1002	A1	Q1014	C1
Q1003	B1	Q1015	D1
Q1004	A1	Q1016	B2
Q1005	B1	Q1017	A2
Q1006	B1	Q1019	A1
Q1007	C1	Q1020	A1
Q1008	C1	Q1022	C1
Q1009	C1	Q1103	D1
Q1010	B2	Q1104	C2
Q1011	B2	Q1105	C1
Q1012	B1	Q1106	B1

# FRONT P.C.BOARD (VEP27089A)

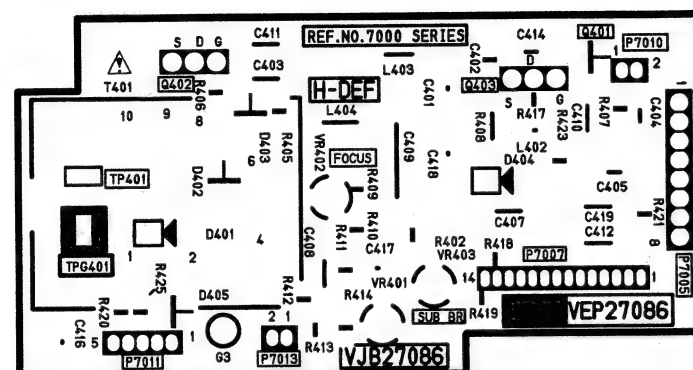
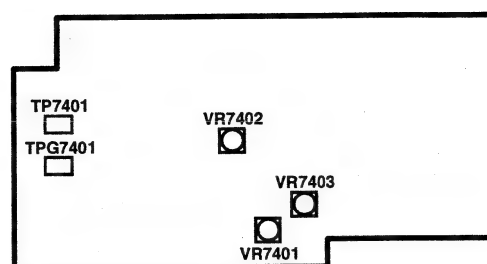


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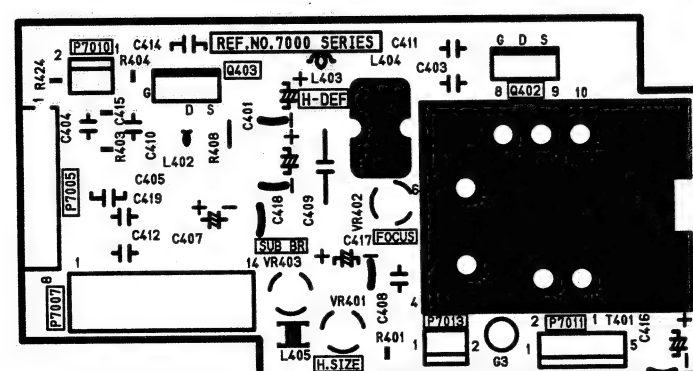
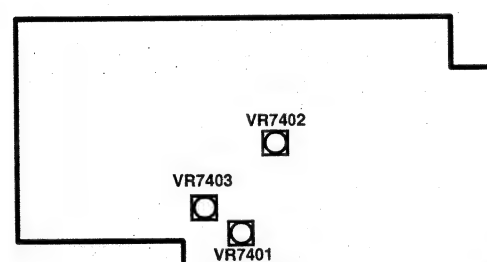


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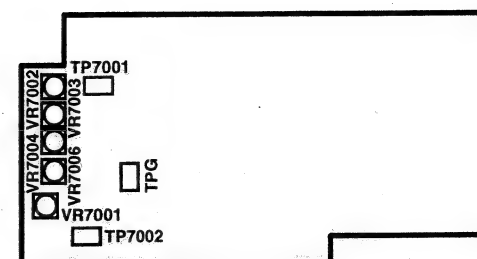
# H DEF P.C.BOARD (VEP27086A)



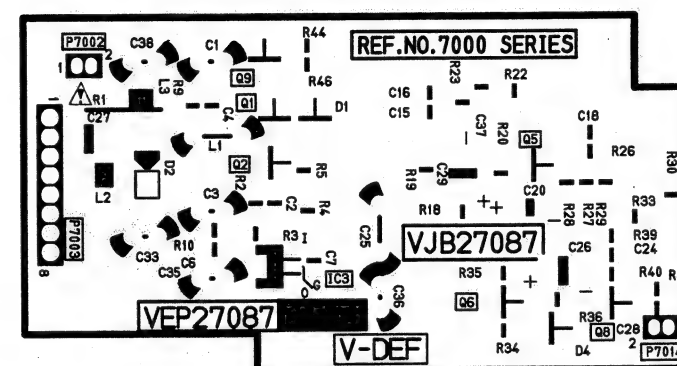
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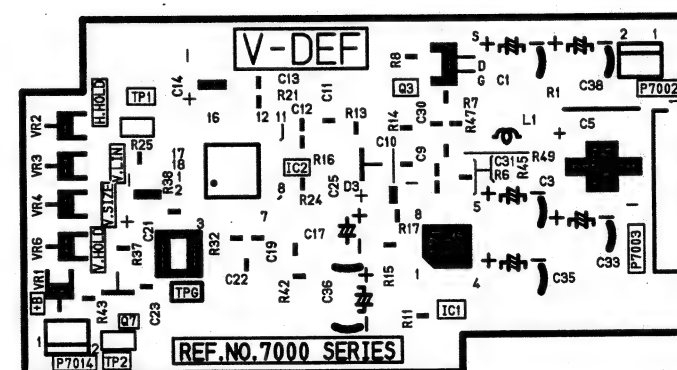
(COMPONENT SIDE)



# V DEF P.C.BOARD (VEP27087A)

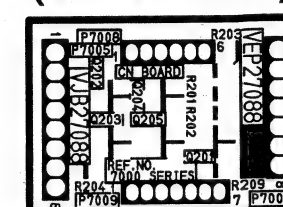


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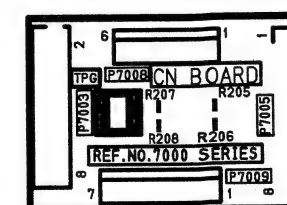


(COMPONENT SIDE)

# CN P.C.BOARD (VEP27088A)



(FOIL SIDE)

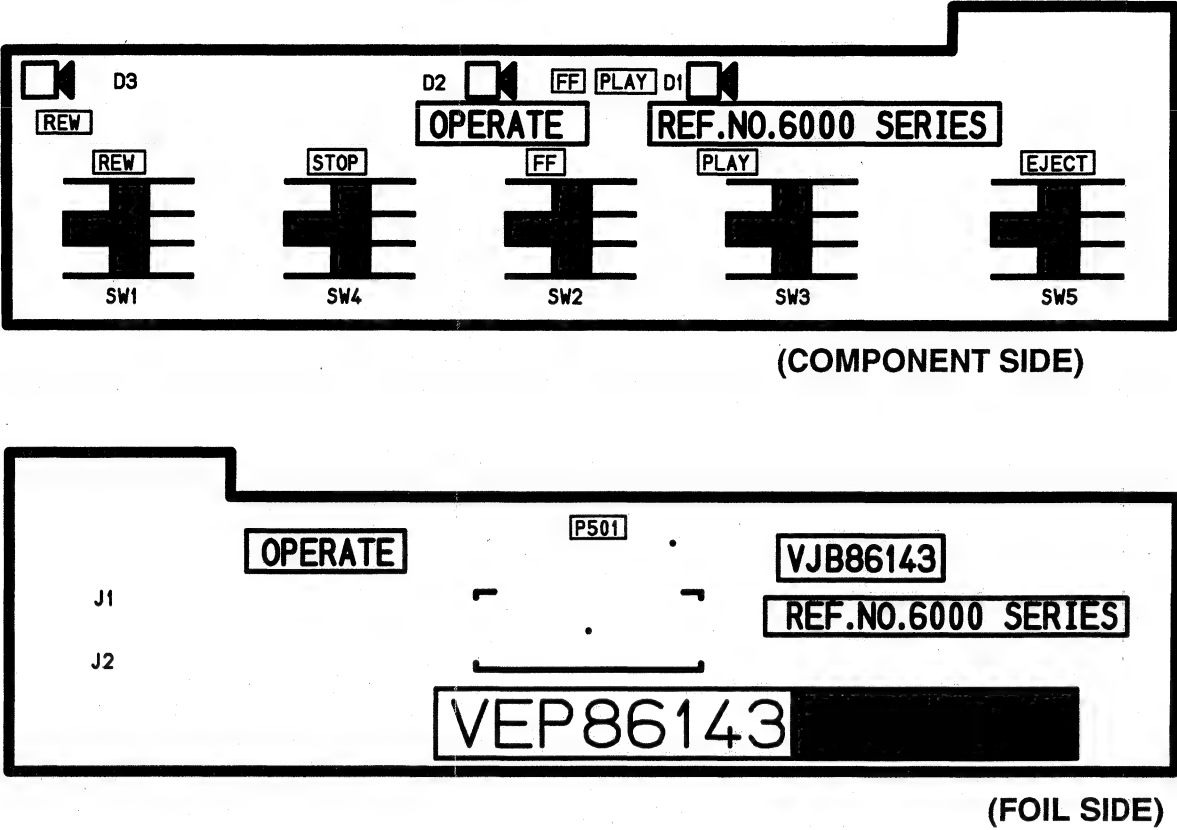


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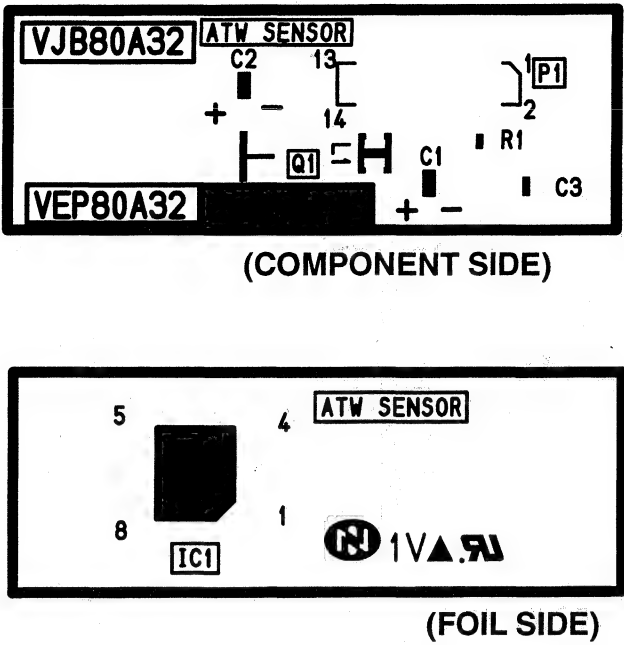
警告 印の部品は、安全上重要な部品です。交換するときは、安全及び性能維持のため必ず指定の部品をご使用ください。

IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

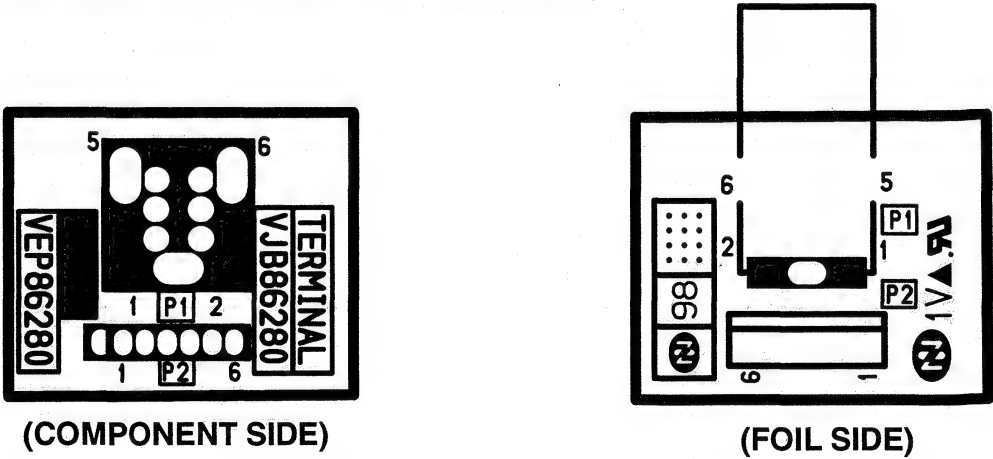
OPERATE P.C.BOARD (VEP86143B)



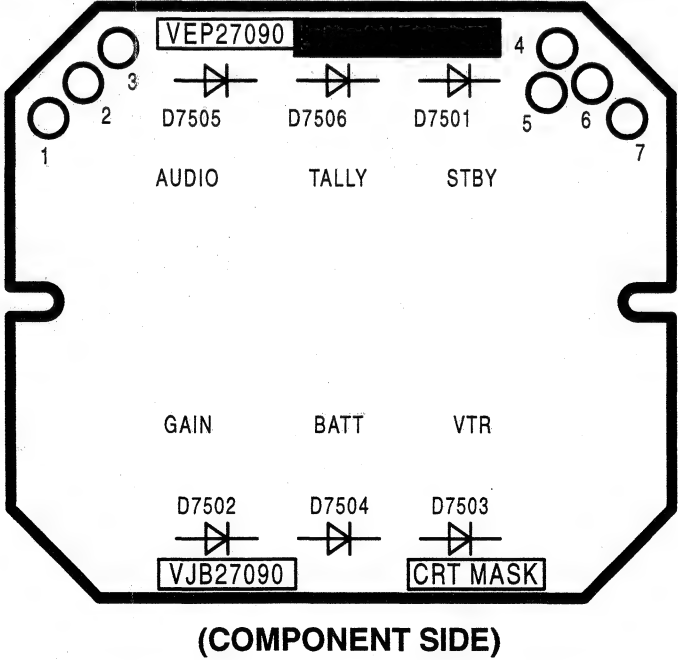
ATW SENSOR P.C.BOARD (VEP80A32A)



DVC PRO TERMINAL P.C.BOARD (AJ-D215HE ONLY VEP86280A)

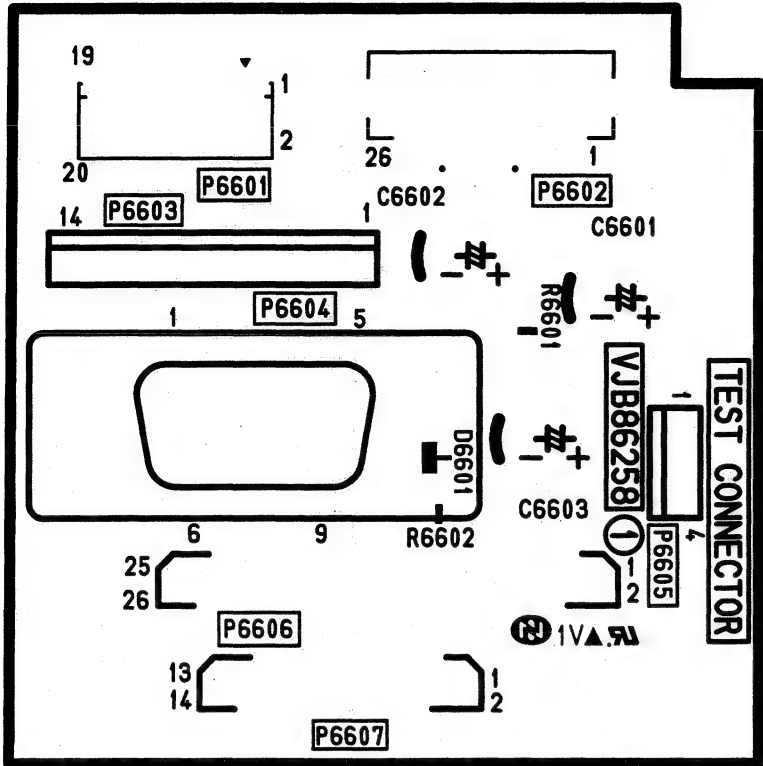


CRT MASK P.C.BOARD (VEP27090C)

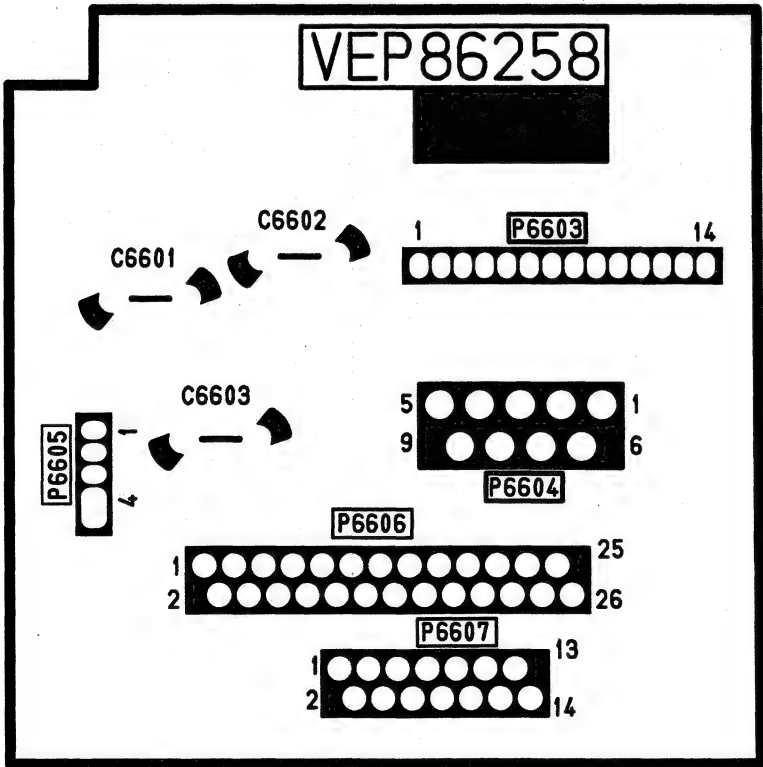




TEST PLUG P.C.BOARD (FOR NTSC:VEP86258A, FOR PAL:VEP86258B)

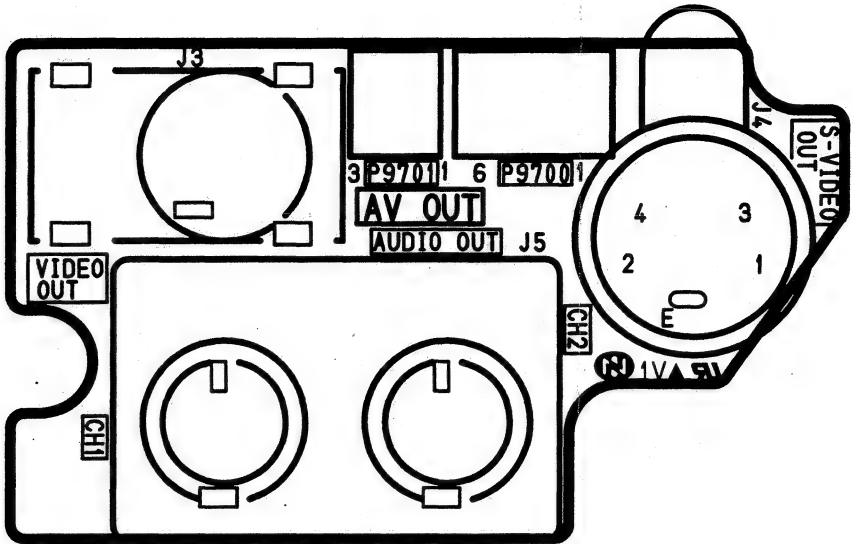


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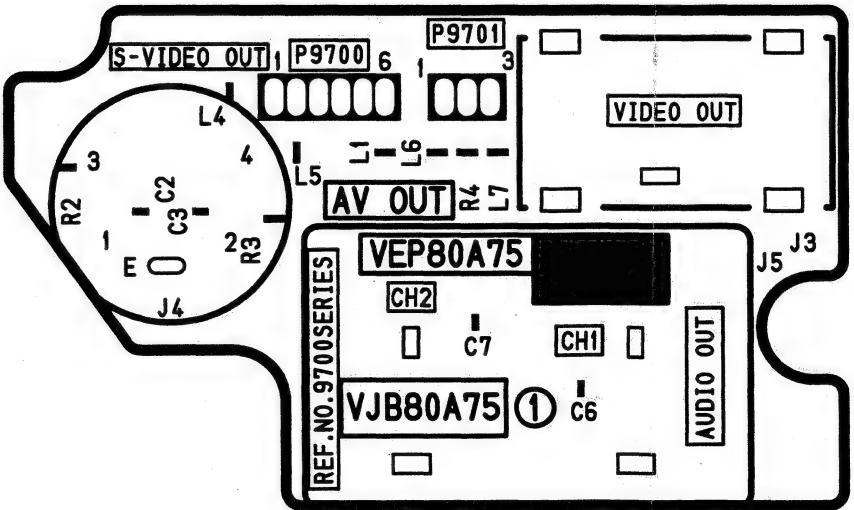


(FOIL SIDE)

AV OUT P.C.BOARD (FOR PAL: VEP80A75A)

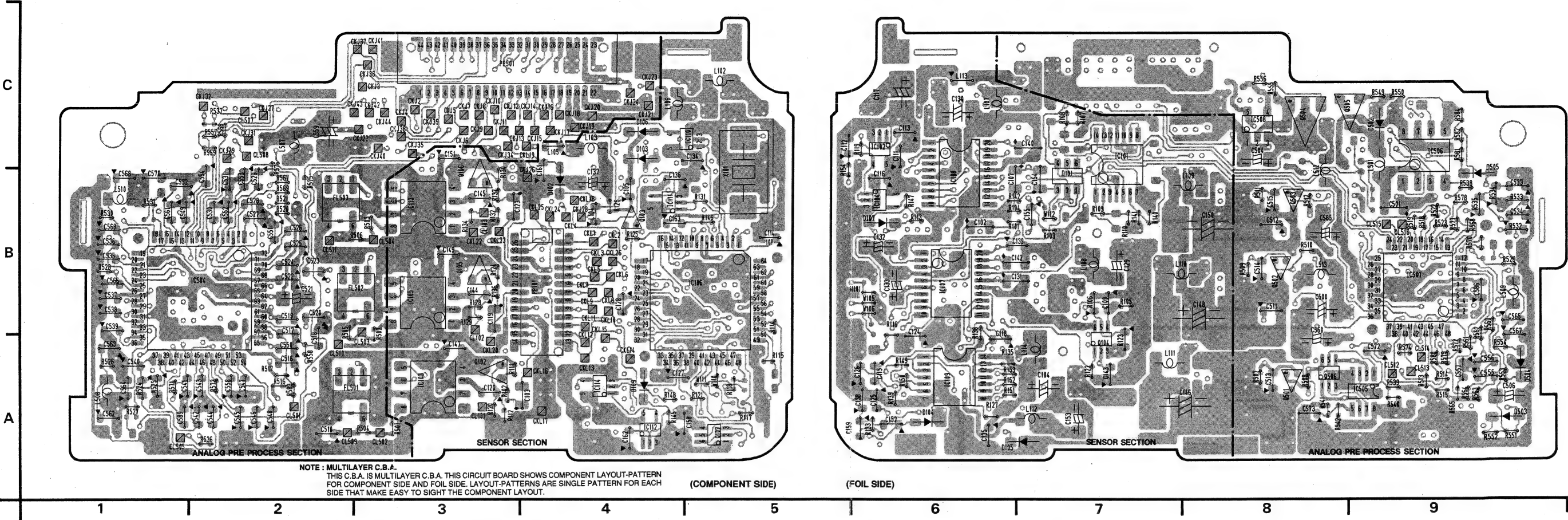


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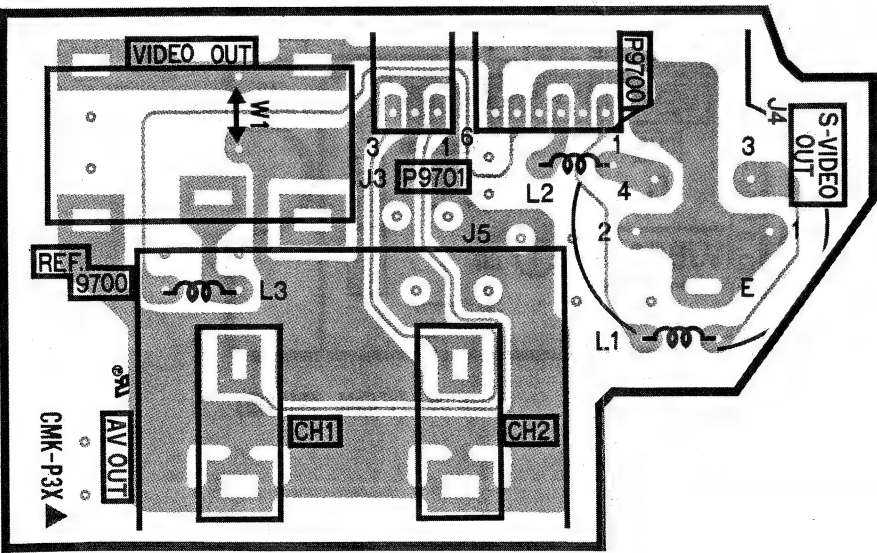


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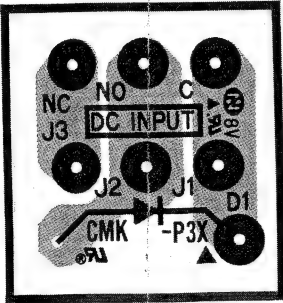
SENSOR (SENSOR, ANALOG PRE PROCESS SECTION) P.C.BOARD (FOR PAL: VEP22251B)



AV OUT P.C.BOARD (FOR NTSC: VEP80A43A)



DC INPUT P.C.BOARD (FOR NTSC: VEP80A44A)



SENSOR PAL COMPONENT	
REF	LOC
IC103	A3
IC105	B3
IC106	B3
IC107	B5
IC110	C5
IC111	B4
IC112	A4
IC113	B3
IC114	A4
IC504	B2
PP101	B4
PP501	C3
Q102	A3
Q103	B4
Q105	B3
Q106	B3
Q107	A5

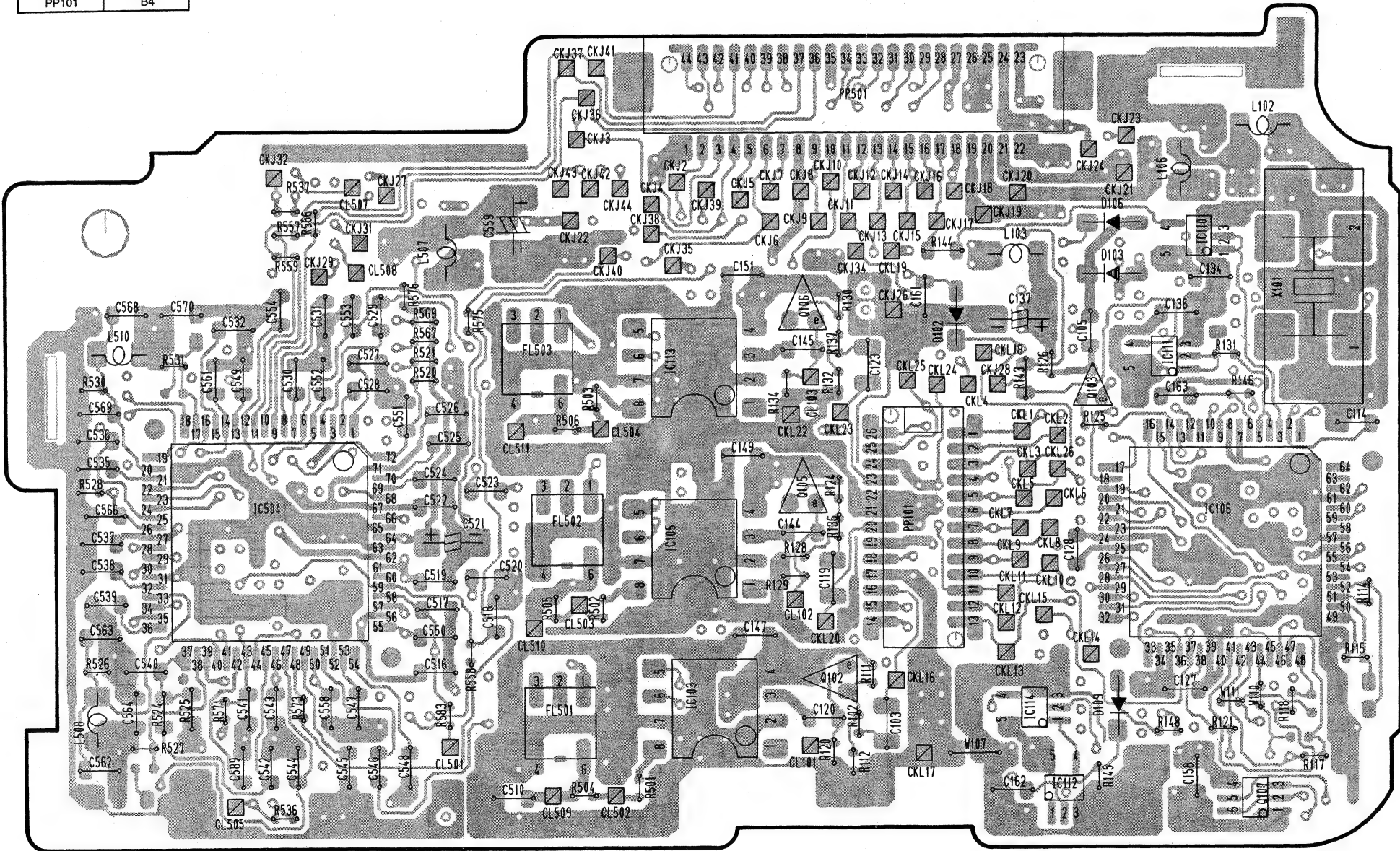
SENSOR PAL FOIL	
REF	LOC
IC101	C7
IC102	C6
IC104	B6
IC107	B6
IC108	B6
IC109	A6
IC505	A9
IC506	C9
IC507	B9
IC508	C8
Q104	A7
Q501	A8
Q502	B8
Q503	B8
Q504	C8
Q505	C9
Q506	A8



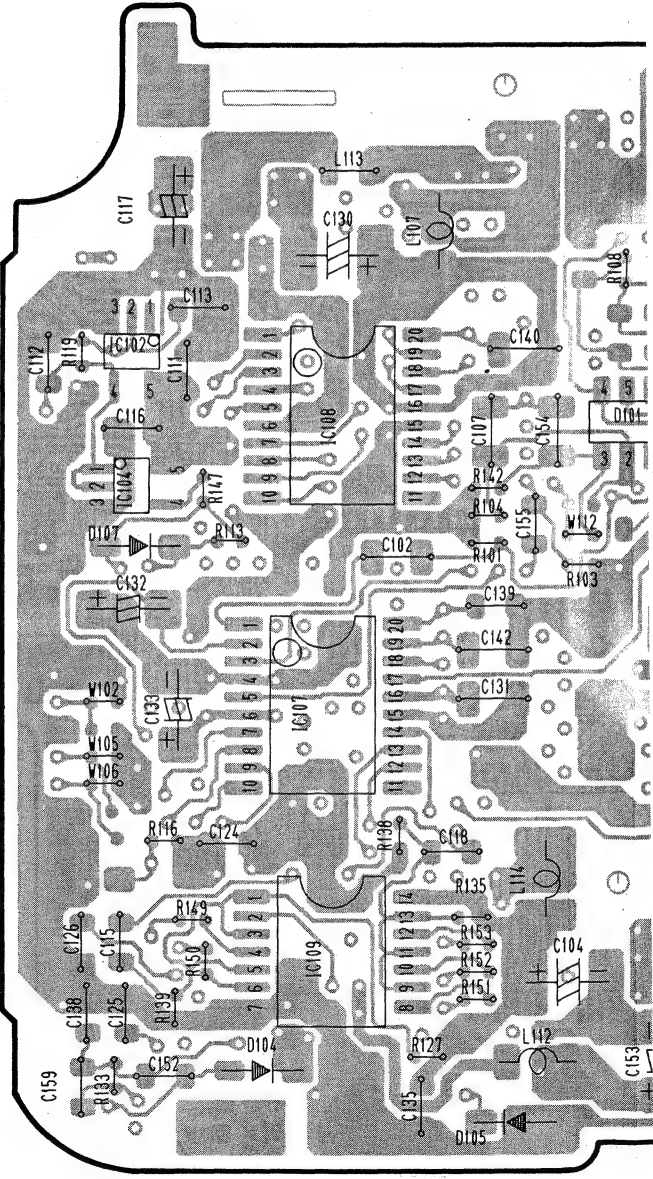
SENSOR (SENSOR, ANALOG PRE PROCESS SECTION) P.C.BOARD (FOR NTSC: VEP22146A)

SENSOR NTSC  
COMPONENT

REF	LOC
IC103	A3
IC105	B3
IC106	B5
IC110	C5
IC111	B4
IC112	A4
IC113	B3
IC114	A4
IC504	B2
Q102	A3
Q103	B4
Q105	B3
Q106	B3
Q107	A5
PP101	B4



(COMPONENT SIDE)



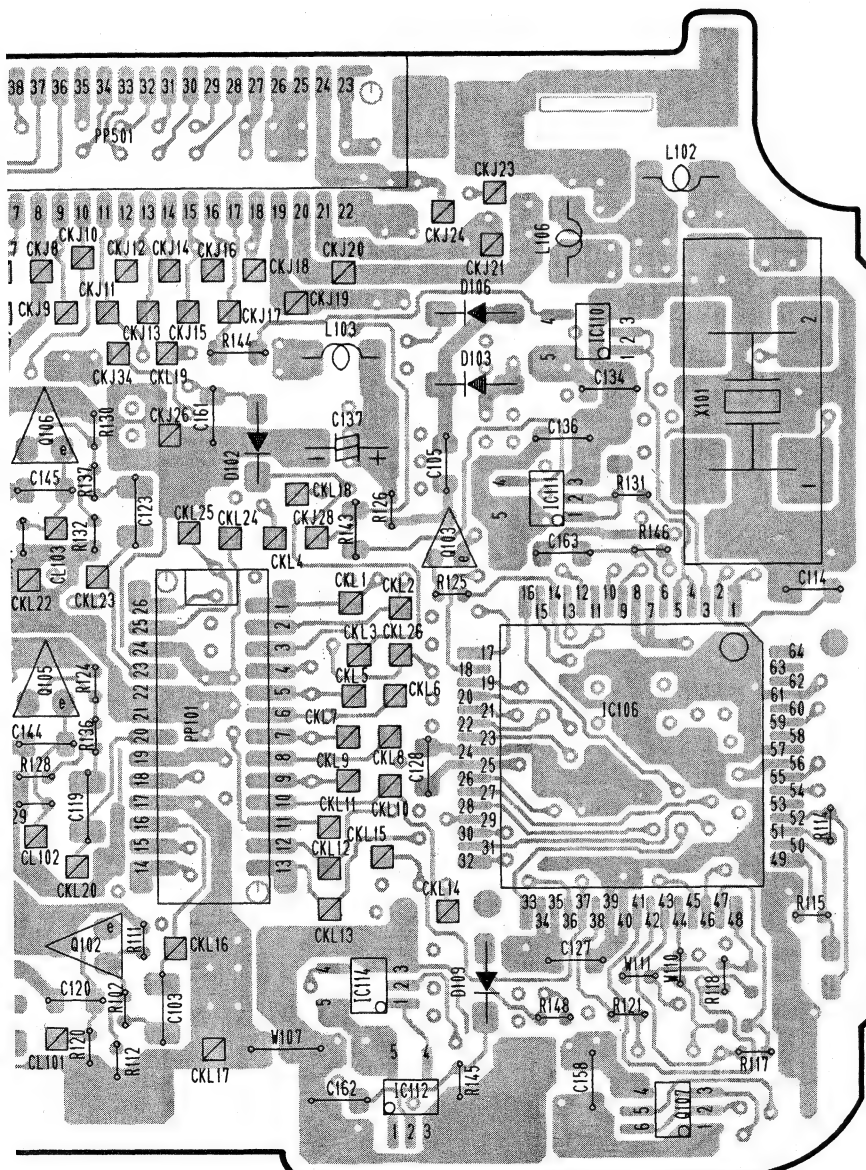
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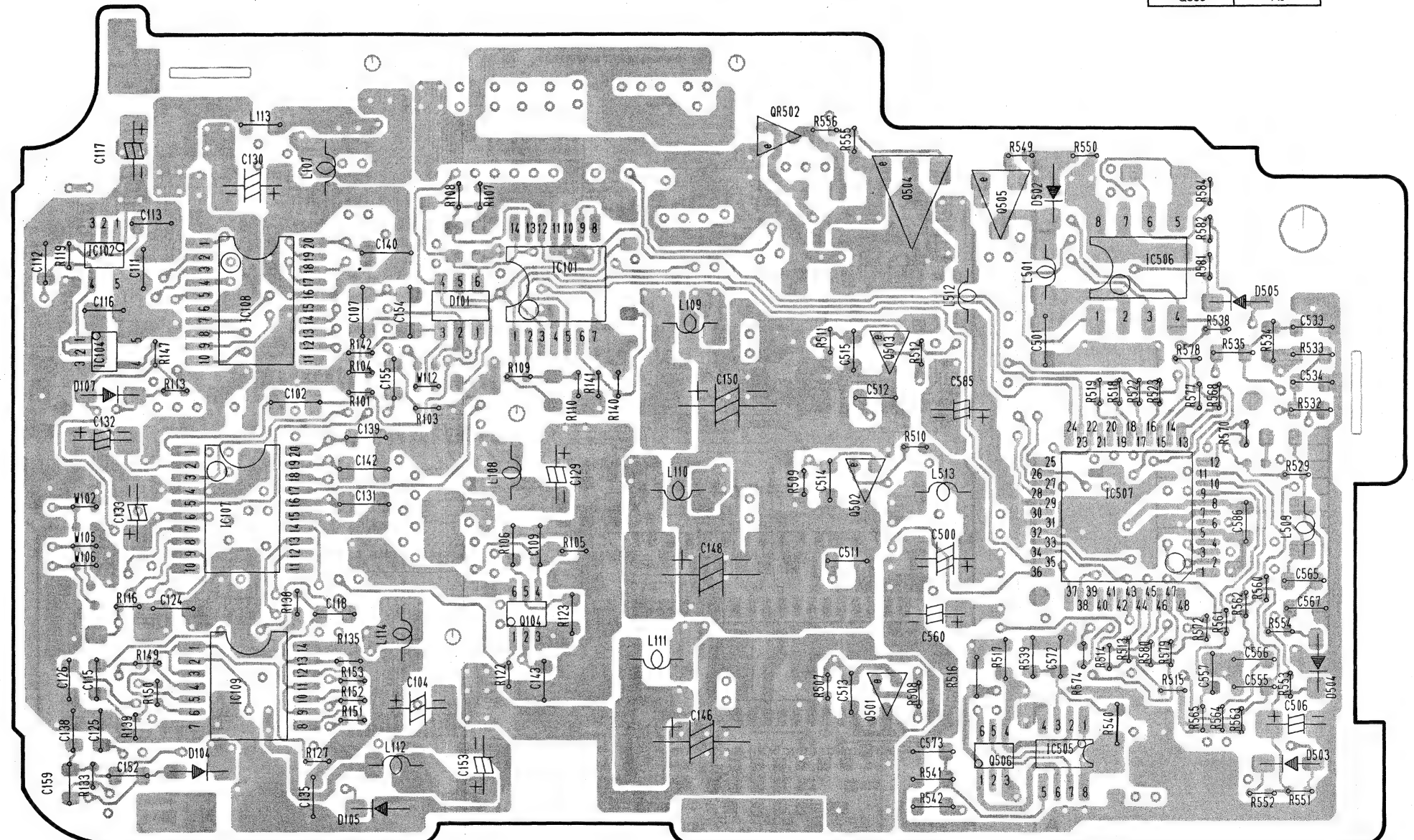
BOARD (FOR NTSC: VEP22146A)

SENSOR NTSC  
FOIL

REF	LOC
IC101	C7
IC102	C6
IC104	B6
IC107	B6
IC108	B6
IC109	A-6
IC505	A9
IC507	B9
Q104	A7
Q501	A8
Q502	B8
Q503	B8
Q504	C8
Q505	C9
Q506	A9



(COMPONENT SIDE)



(FOIL SIDE)

4

5

6

7

8

9

CBA-15

CBA-15



# PROCESS (POROCESS, LENS DRIVE SECTION) P.C.BOARD (FOR NTSC: VEP23285B)

PROCESS PAL  
COMPONENT

REF	LOC
IC305	E2
IC306	E4
IC307	D4
IC309	D1
IC310	D2
IC311	D3
IC316	E2
IC702	A2
IC703	B1
IC705	B3
Q704	B4
FP301	C3
FP302	E5
FP303	C5
FP305	B4
FP701	B2

PROCESS PAL  
FOIL

REF	LOC
IC301	D7
IC302	C8
IC303	E6
IC304	E8
IC308	D7
IC312	D6
IC313	E9
IC317	C6
IC701	B8
IC704	B8
IC706	B6
IC707	B9
IC708	B7
QR701	B8
FP301	B5
PP701	A8
TL301	A7
TL302	A8

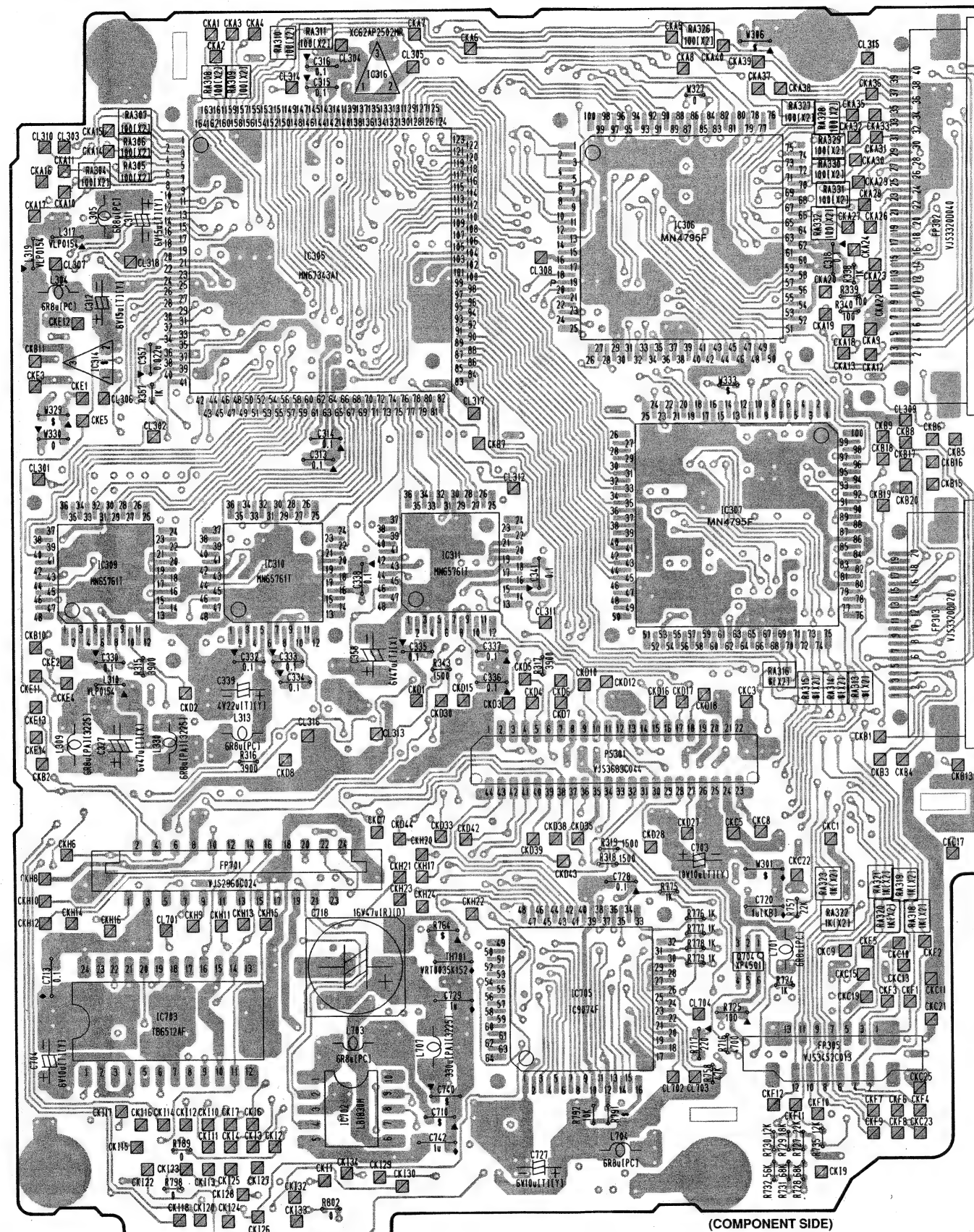
E

D

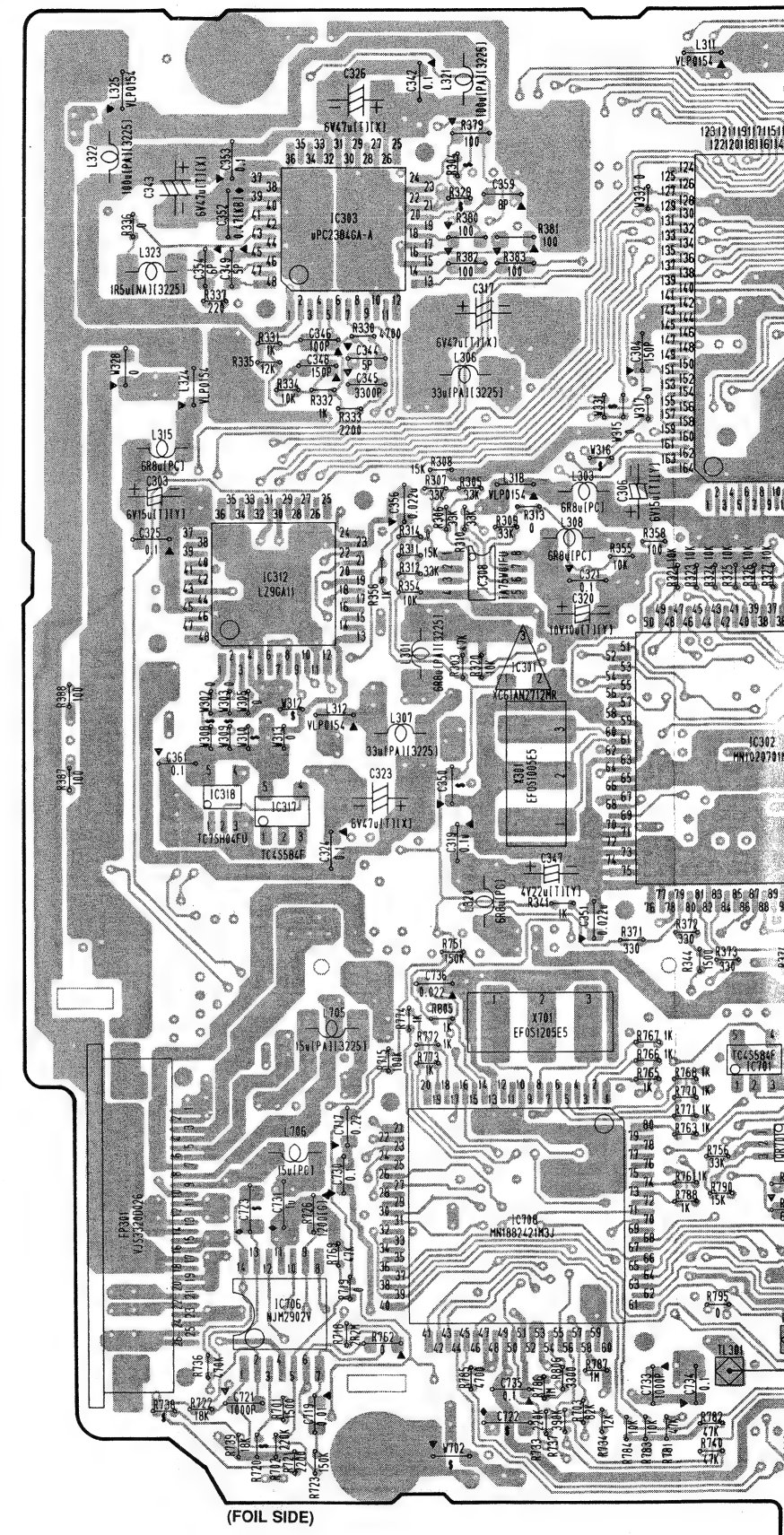
C

B

A



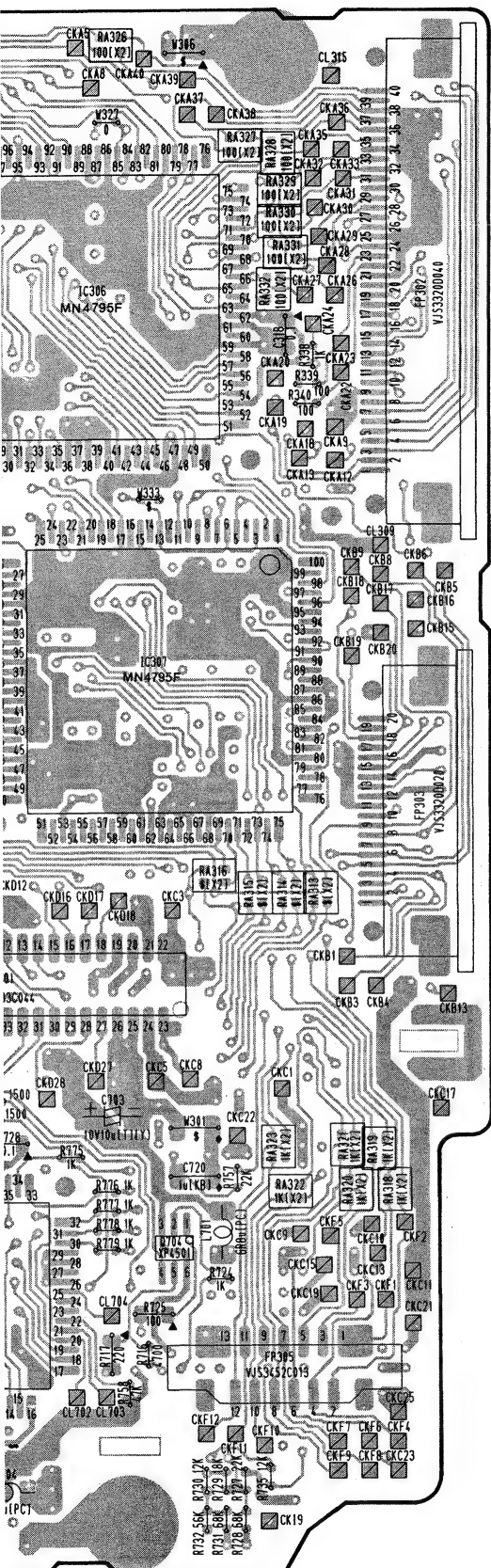
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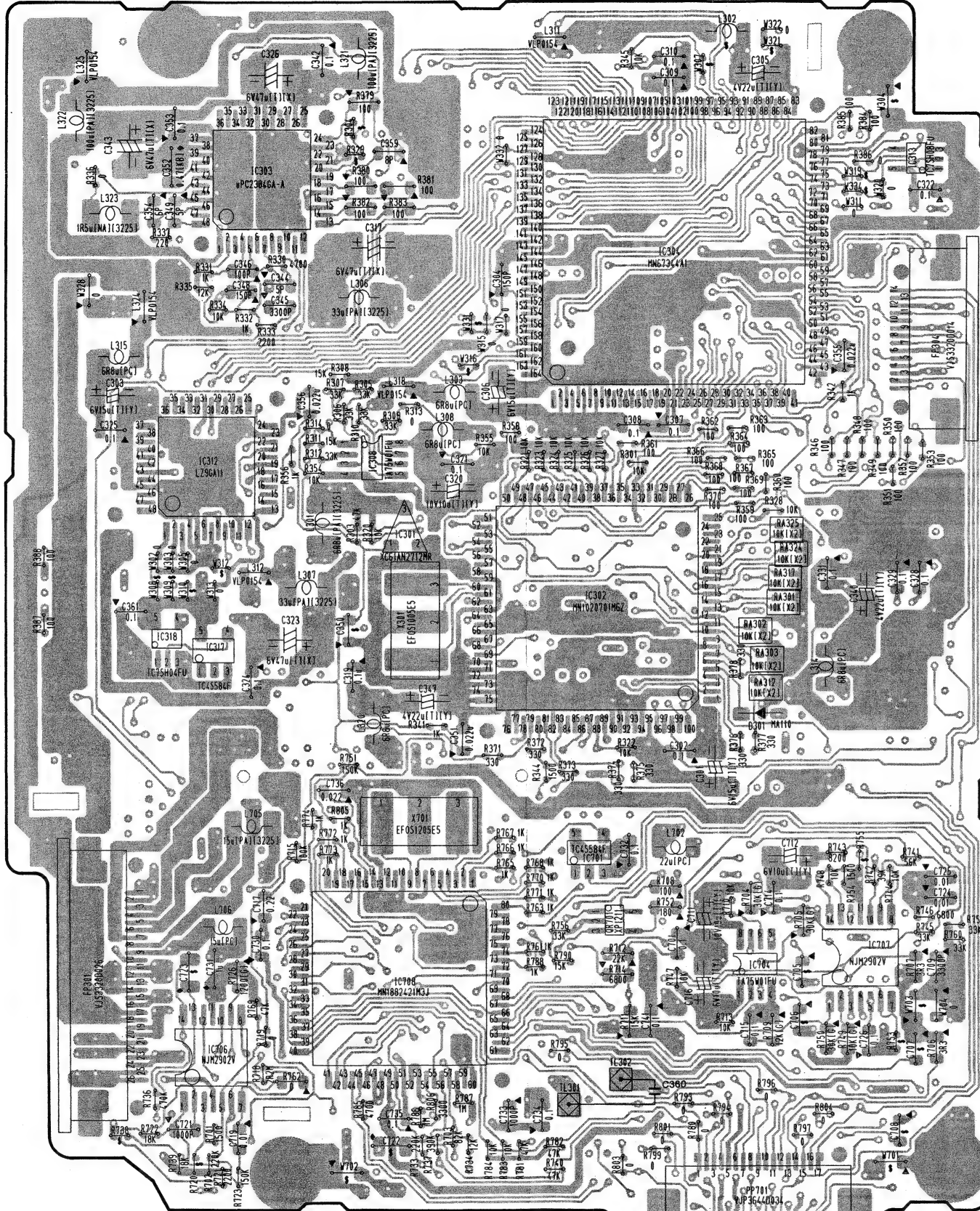
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ON) P.C.BOARD (FOR NTSC: VEP23285B)



(COMPONENT SIDE)



(FOIL SIDE)

PROCESS NTSC  
COMPONENT

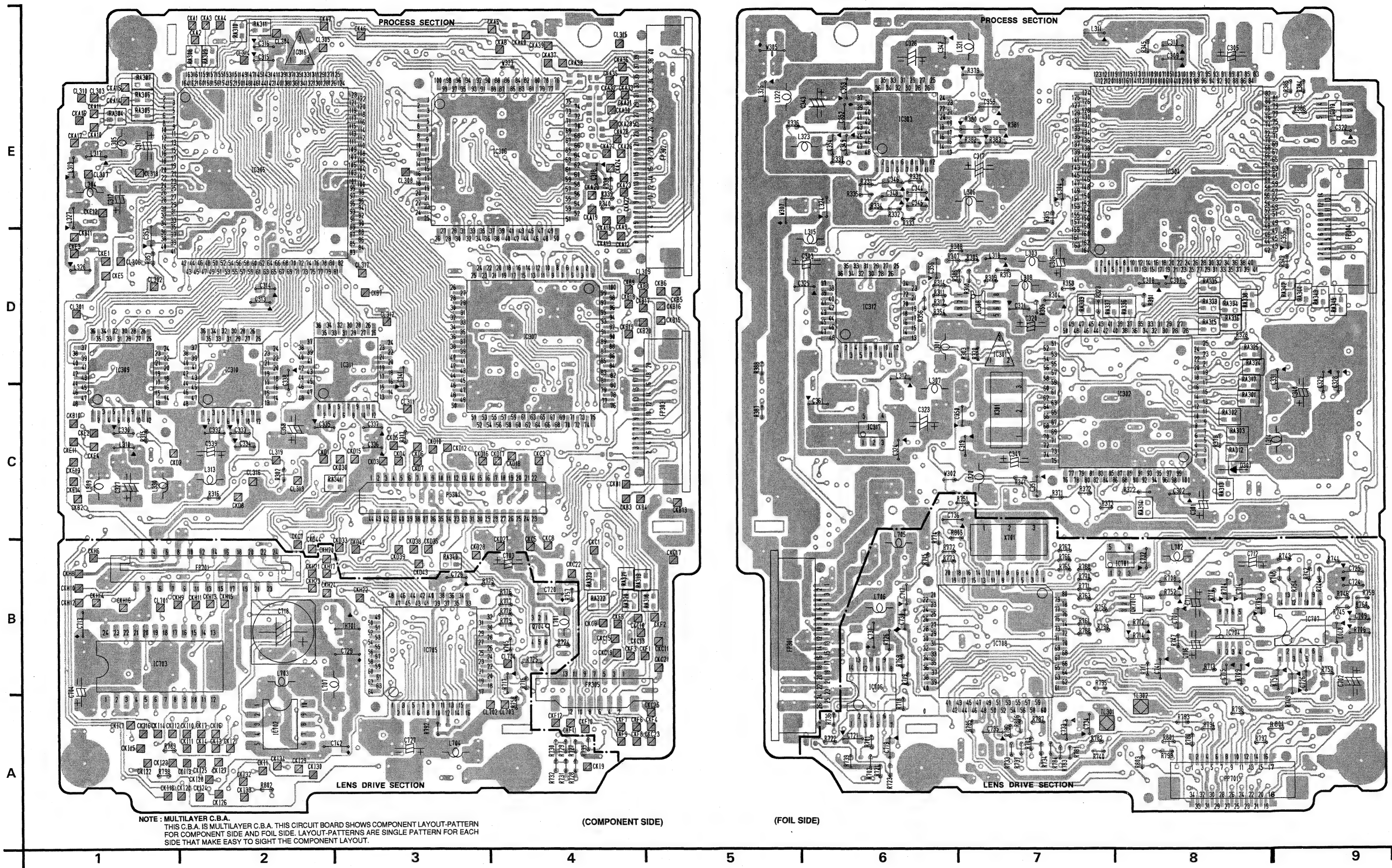
REF	LOC
FP302	E5
FP303	C5
FP305	B4
FP701	B2
IC305	E2
IC306	E4
IC307	D4
IC309	D1
IC310	D2
IC311	D3
IC314	D1
IC316	E2
IC702	A2
IC703	B1
IC705	B3
PS301	C3
Q704	B4

PROCESS NTSC  
FOIL

REF	LOC
FP301	B5
FP304	D9
IC301	D7
IC302	C8
IC303	E6
IC304	E8
IC308	D7
IC312	D6
IC313	E9
IC317	C6
IC318	C6
IC701	B8
IC704	B8
IC706	A6
IC707	B9
IC708	B7
PP701	A8
QR701	B8
TL301	A7
TL302	A8



PROCESS (POROCESS, LENS DRIVE SECTION) P.C.BOARD (FOR PAL: VEP23422B)



## DIGITAL VIDEO INTERFACE BOARD

# AJ-YAD210P

### *Specifications*

#### ■ Printed circuit board

##### Dimensions (W×H×D):

5 7/8"×3/8"×4 3/8" (149×8×110 mm)

##### Weight:

0.132 lb (60 g)

##### Power consumption:

0.8 W

#### ■ Items packed with board

- DVCPRO connector unit
- Screws for the DVCPRO connector unit (×4)
- Floppy disk for upgrading the system software
- Jumper wires (VEE0F66, VEE0F70: ×1 each)
- Circuit board spacers (VMS4913: ×4)
- Screws for the circuit board (×8)

### *Models supported*

Digital camera recorders: **AJ-D200, AJ-D210, AJ-D215**

### *Features*

This product is a digital video interface board which is designed exclusively for use in the AJ-D200, AJ-D210 and AJ-D215 digital video camera recorders.

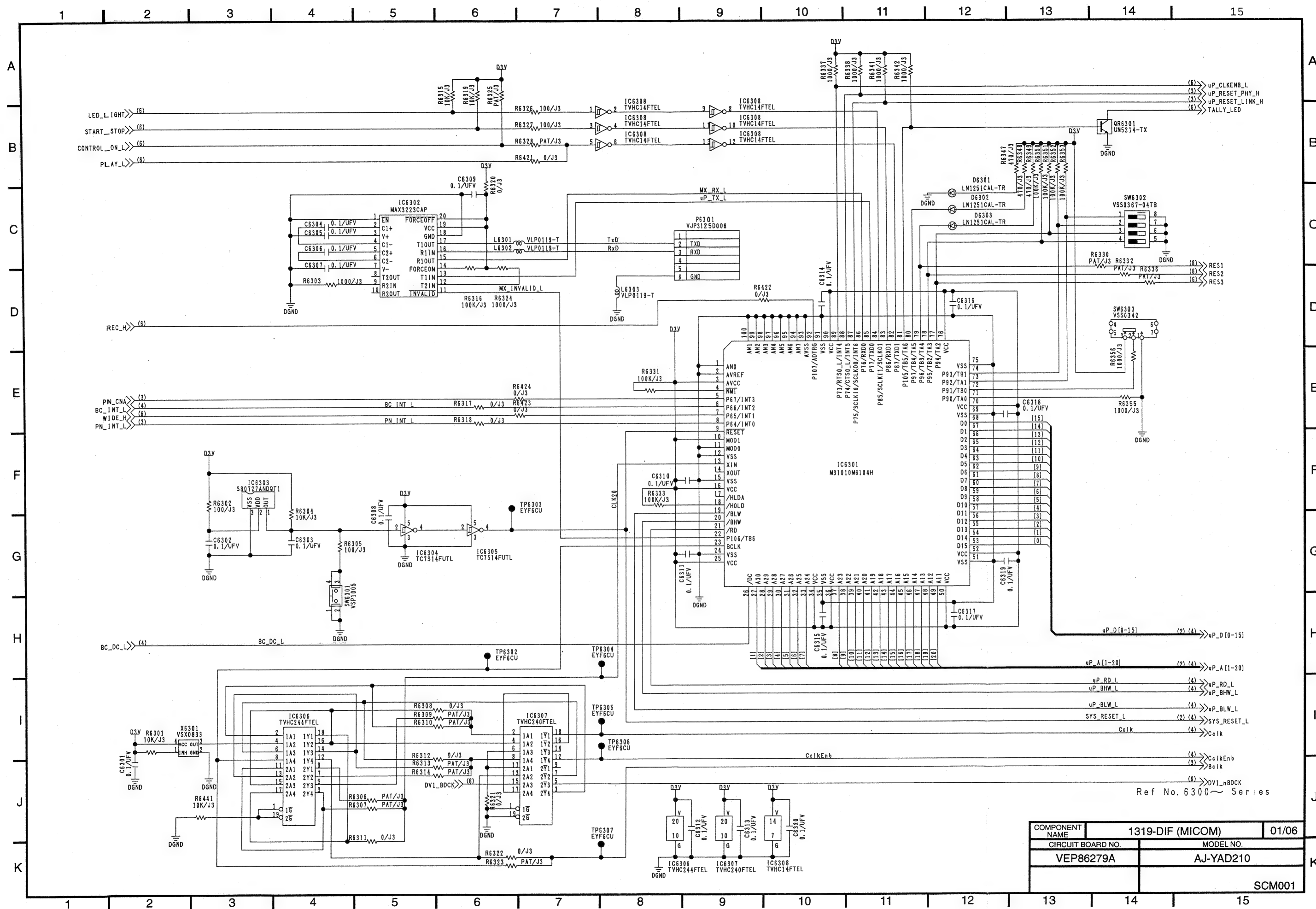
Installation of this board in the AJ-D200/D210/D215 creates an environment in which the AV signals of the AJ-D200/D210/D215 can be transmitted digitally. (IEEE1394-1995 standard compliant)

If connection is made with the AJ-D230H digital VTR, this unit can be used as a recording backup for the AJ-D200/D210/D215.



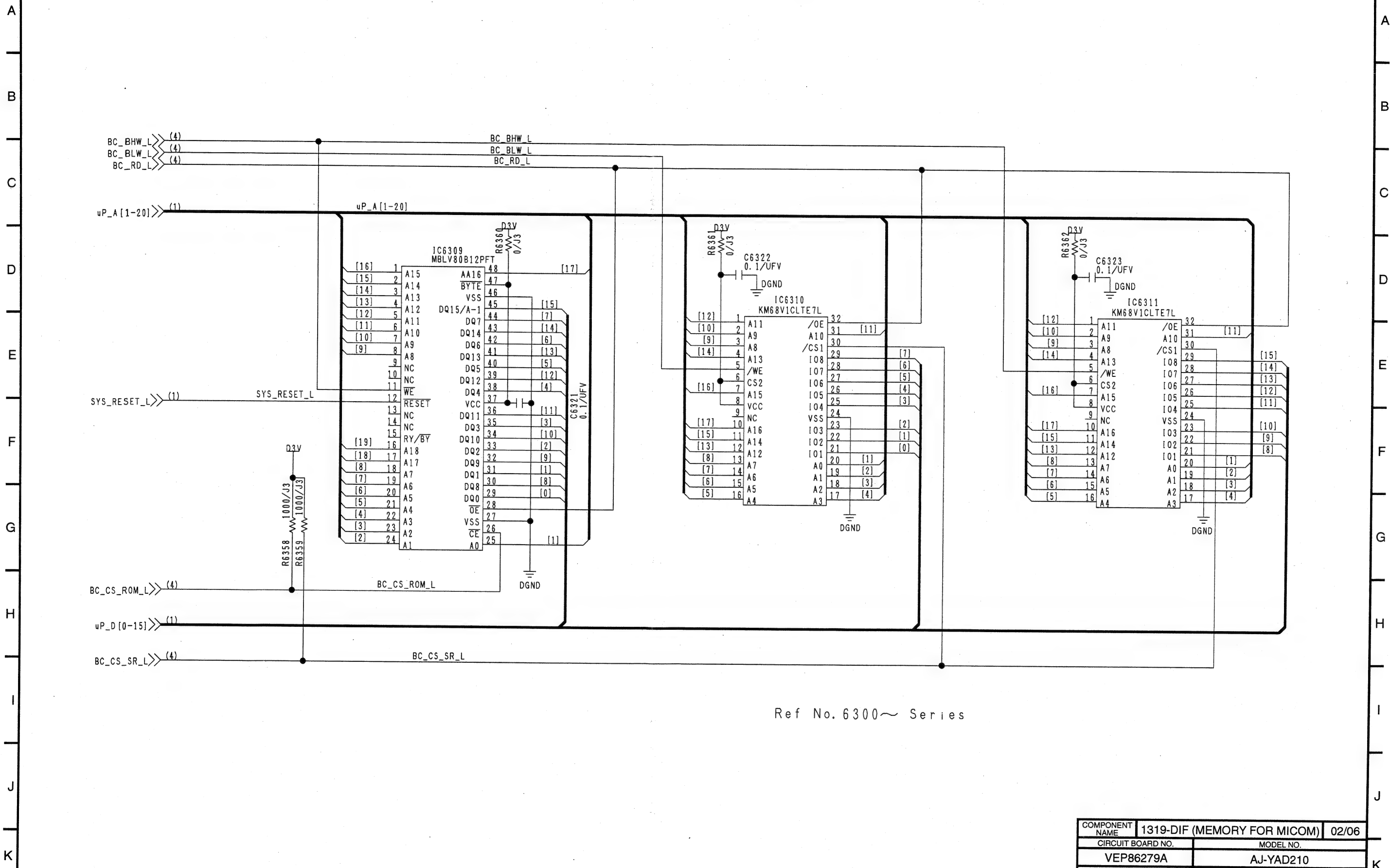
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	1319 DIF (MOMORY FOR MICOM) SCHEMATIC DIAGRAM .....	SCM-2
	1319 DIF (PINE) SCHEMATIC DIAGRAM .....	SCM-3
	1319 DIF (BCC) SCHEMATIC DIAGRAM .....	SCM-4
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	1319 DIF (CLOCK GENERATER).....	SCM-6
	DVCPRO TERMINAL SCHEMATIC DIAGRAM .....	SCM-7
	DVC PRO TERMINAL P.C.BOARD.....	CBA-1
	1319 DIF P.C.BOARD .....	CBA-2
SECTION 8	EXPLODED VIEWS & PARTS LIST	



COMPONENT NAME	1319-DIF (MICOM)	01/06
CIRCUIT BOARD NO.	VEP86279A	MODEL NO.
		AJ-YAD210
		SCM001

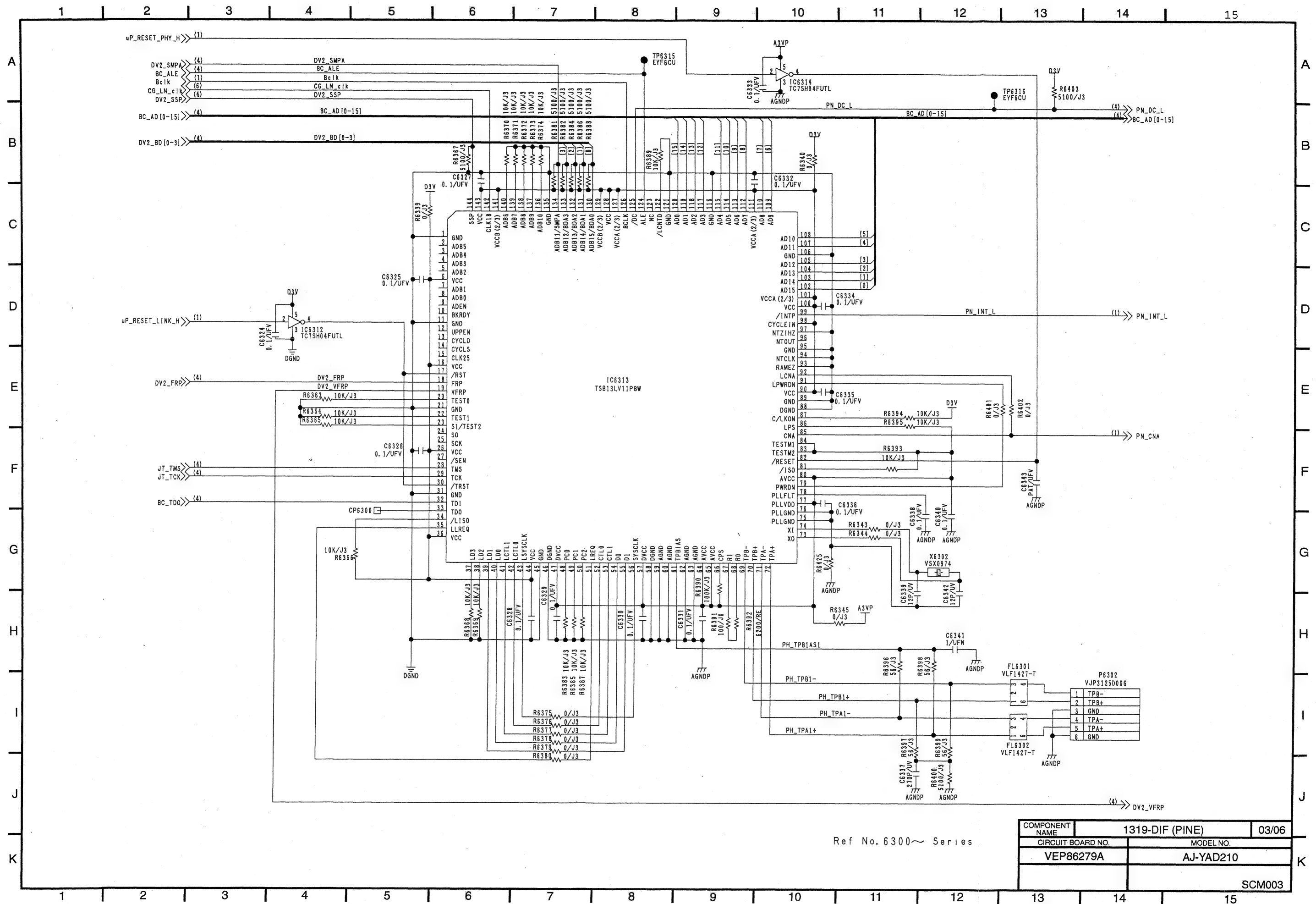
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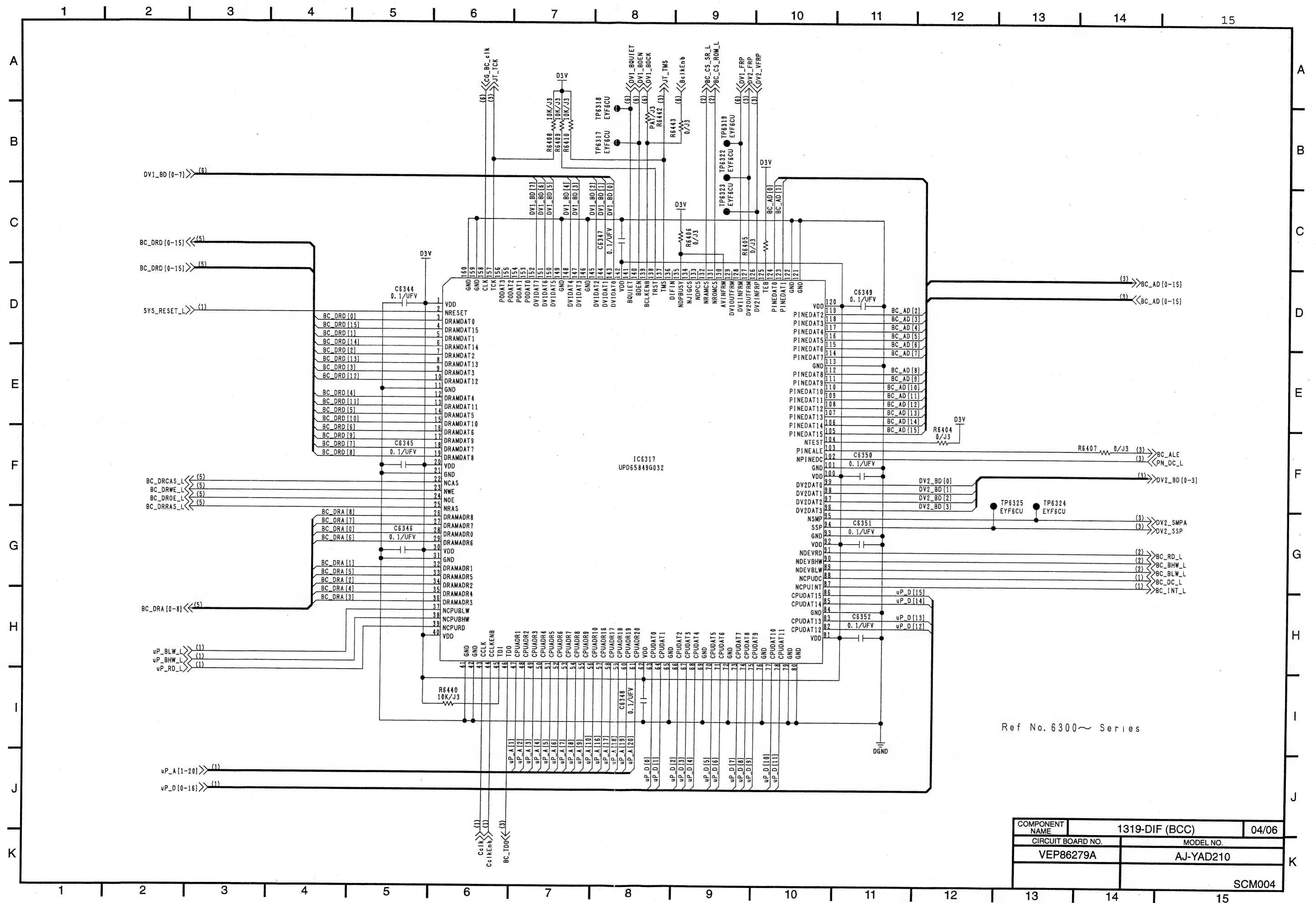
Ref No. 6300 ~ Series

COMPONENT NAME	1319-DIF (MEMORY FOR MICOM)	02/06
CIRCUIT BOARD NO.	VEP86279A	MODEL NO.
		AJ-YAD210
		SCM002

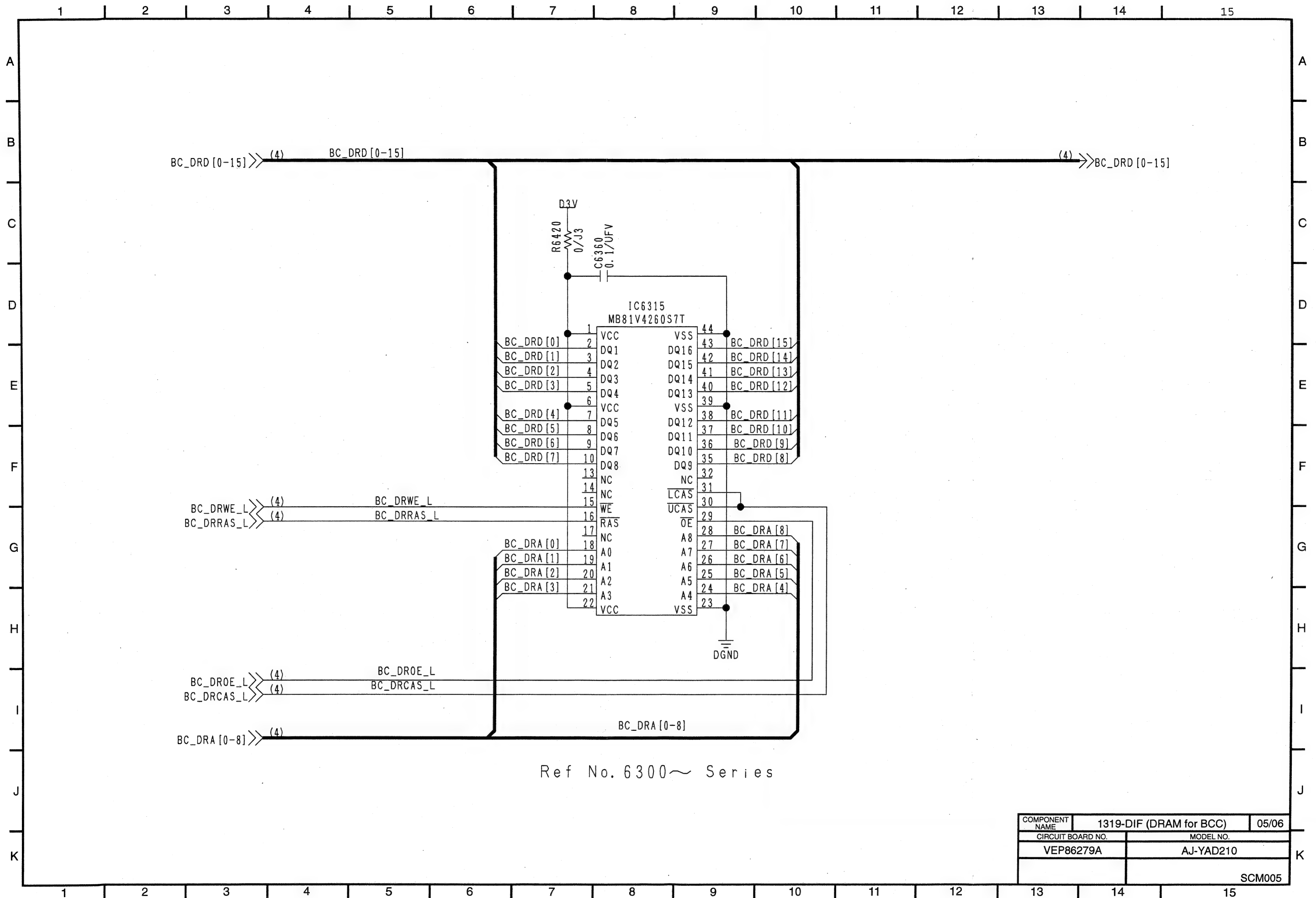
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

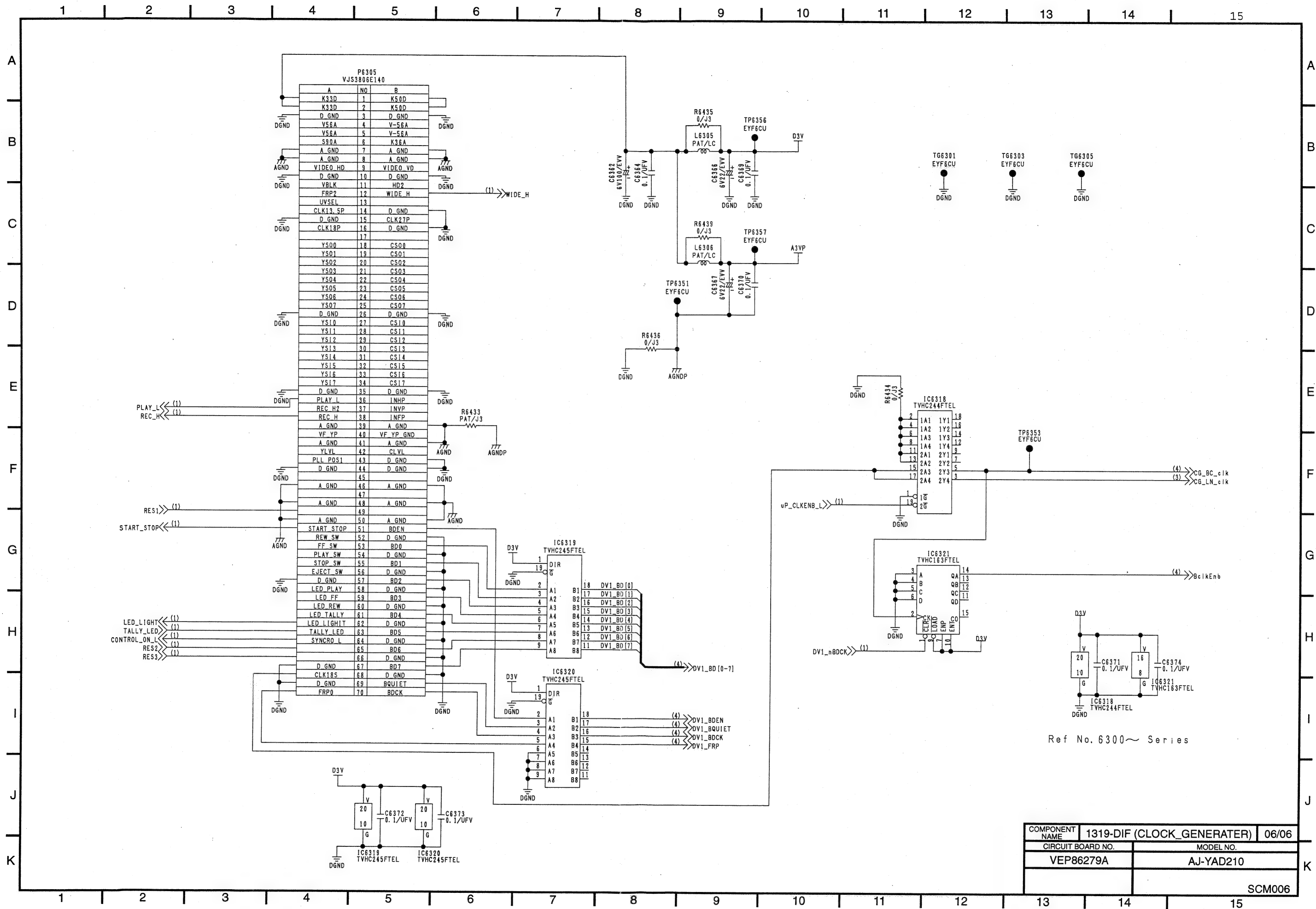


COMPONENT NAME	1319-DIF (PINE)	03/06
CIRCUIT BOARD NO.	VEP86279A	MODEL NO.
		AJ-YAD210
		SCM003



COMPONENT NAME	1319-DIF (BCC)	04/06
CIRCUIT BOARD NO.	MODEL NO.	
VEP86279A	AJ-YAD210	
	SCM004	





Ref No. 6300 ~ Series

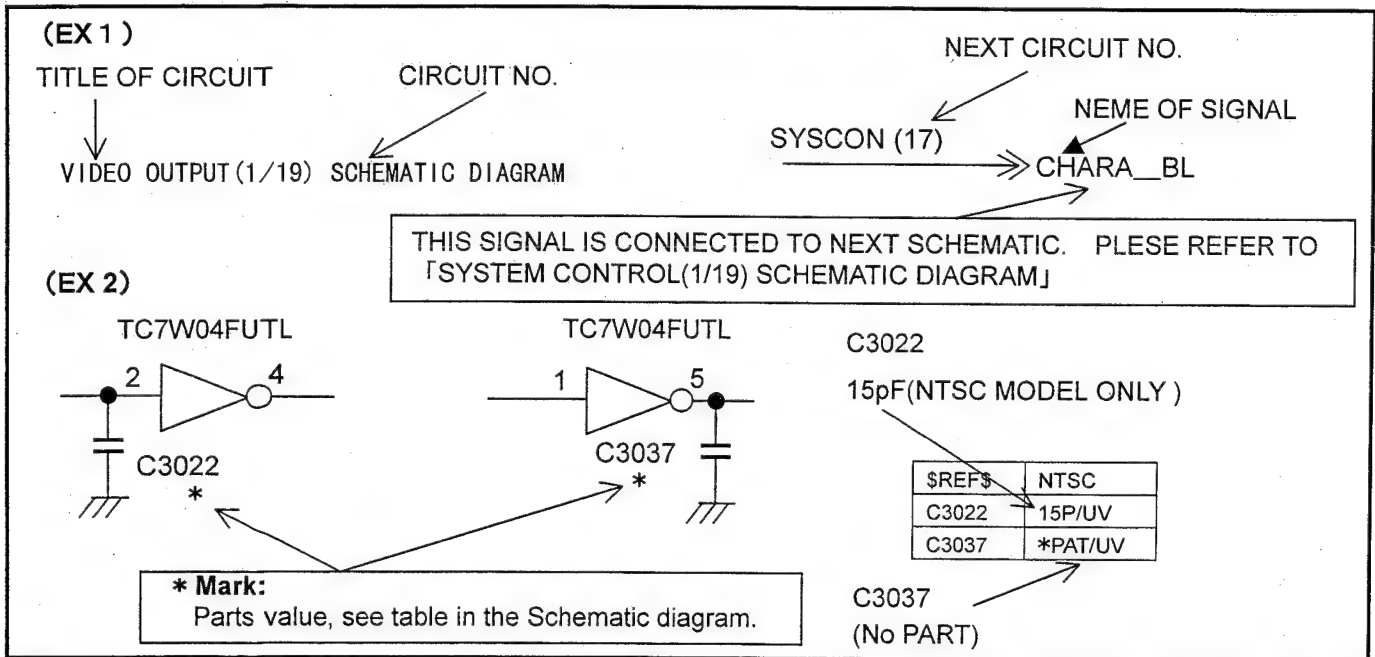
COMPONENT NAME	1319-DIF (CLOCK_GENERATER)	06/06
CIRCUIT BOARD NO.	VEP86279A	MODEL NO. AJ-YAD210
SCM006		



# SECTION 2

## SCHEMATIC DIAGRAMS & CIRCUIT BOARD DIAGRAMS

### NOTE



### IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

### CONTENTS

1319 DIF (MICOM) SCHEMATIC DIAGRAM.....	SCM-1
1319 DIF (MOMORY FOR MICOM) SCHEMATIC DIAGRAM.....	SCM-2
1319 DIF (PINE) SCHEMATIC DIAGRAM.....	SCM-3
1319 DIF (BCC) SCHEMATIC DIAGRAM.....	SCM-4
1319 DIF (DRAM FOR BCC) SCHEMATIC DIAGRAM .....	SCM-5
1319 DIF (CLOCK GENERATER).....	SCM-6
DVCPRO TERMINAL SCHEMATIC DIAGRAM.....	SCM-7
DVC PRO TERMINAL P.C.BOARD .....	CBA-1
1319 DIF P.C.BOARD .....	CBA-2

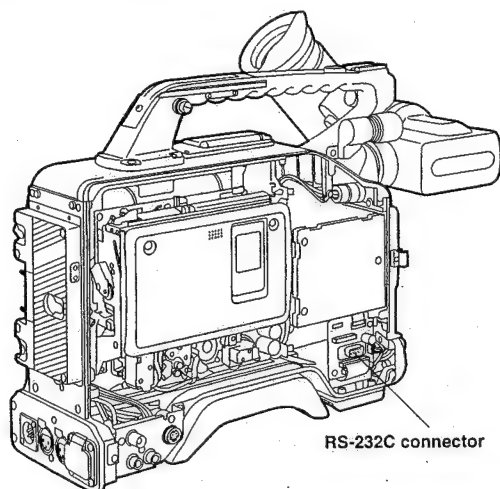
**AJ-D200/D210/D215 VTR modes and  
DVCPRO interface output statuses**

AJ-D200/AJ-D210/AJ-D215				AJ-D230H (external VTR for recording)	
VTR mode	DVCPRO I/F OUT	VIDEO OUT	AUDIO OUT	Synchronized recording mode	LOCAL mode
STOP	Camera E-E output (AUDIO/VIDEO)	Camera E-E output	E-E output (AUDIO IN)	Key operations are acknowledged.	All key operations of the AJ-D230H are acknowledged regardless of the AJ-D200/D210/D215 VTR operation mode.
FF/REW					
STANDBY OFF					
PLAY	Tape output (AUDIO/VIDEO)	Tape output	Tape output	Key operations are not acknowledged.	
STILL (PLAY+PLAY)	Tape output (VIDEO)		Sound muting		
PLAY+FF/PLAY+REW					
REC	Camera E-E output (AUDIO/VIDEO)	Camera E-E output	E-E output (AUDIO IN)	Key operations are not acknowledged. Operations are synchronized with the AJ-D200/D210/D215 VTR operation mode.	
REC PAUSE					
EJECT				Key operations are not acknowledged. However, keys can be operated when the AJ-D200/D210/D215 is set to the STOP mode.	
Remarks	Use a dedicated DVCPRO interface cable.	BNC output		INPUT SELECT switch: "OPTION" position LOCAL/MENU/REMOTE switch: "REMOTE" position	INPUT SELECT switch: "OPTION" position LOCAL/MENU/REMOTE switch: "LOCAL" position

E-17

E-18

2. Connect the RS-232C connector (D-SUB, 9 pins) of the SYSCON circuit board to the personal computer using the RS-232C cable.



3. Use the upgrading floppy disk which is packed with the board to upgrade the system software.

E-13

### Operating precautions

- Use a dedicated DVCPRO interface cable (AJ-DTC2P or AJ-DTC4P) for the connection.
- Disturbances may be caused in the AV signals by turning the connected equipment's power ON or OFF and by connecting or disconnecting the interface cable.
- It may take a few seconds for the operation of the system to stabilize when the mode is changed. Wait until the system operation has stabilized before proceeding to record.
- When recording with DVCPRO interface input signals, the recording volume level control on the AJ-D230H will not function.
- The REC command to the AJ-D230H for backup recording purposes is supported but the timing at which the AJ-D230H is set to the recording mode will be delayed by one second or so from the timing at which the AJ-D200/D210/D215 enters the recording mode.
- Interface signals cannot be input to the AJ-D200/D210/D215 DVCPRO. Neither is it possible to control a AJ-D200/D210/D215 VTR using the AV/C command.
- Time code data and UB data are not contained in the DVCPRO interface output signals from the AJ-D200/D210/D215. When a camera image from the AJ-D200/D210/D215 is to be recorded on an external VTR, it is recommended that the TCG mode be set to the FREE RUN setting in advance.

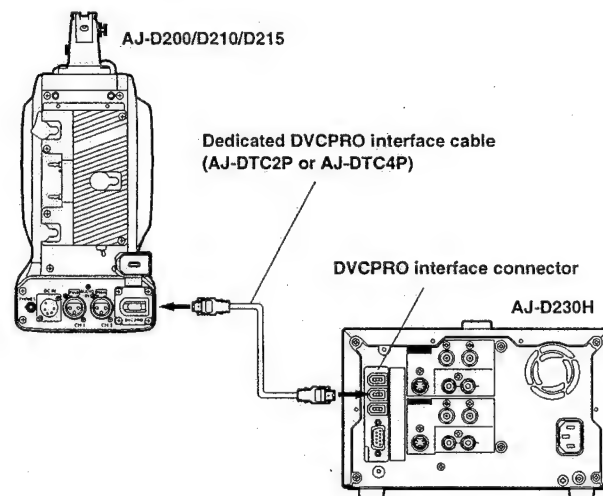
However, the time code data and UB data on the playback tape will be output but only in the playback output signals.

E-15

### Equipment connections

Use a dedicated DVCPRO interface cable (AJ-DTC2P or AJ-DTC4P) to connect the AJ-D200/D210/D215.

(The input/output pins on the DVCPRO interface connector are bidirectional. No distinction is made between the input and output sides.)

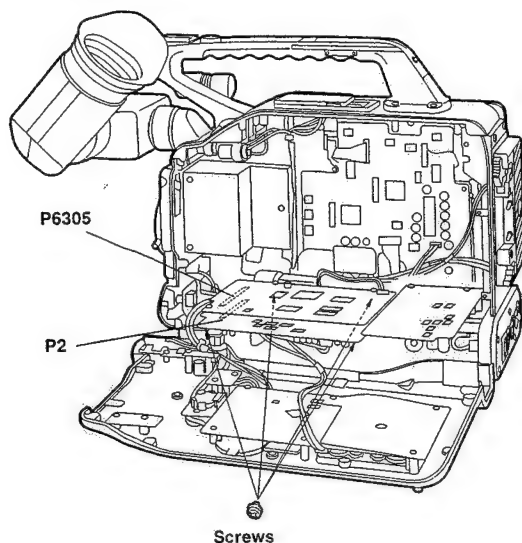


E-14

- The sound is muted during still picture, fast forward, cue, rewind and review, that is, at all times except during AV playback.
- When a tape has been loaded in the AJ-D200/D210/D215, the AJ-D230H controls the recording in synchronization with the recording start button (VTR START/STOP button) on the AJ-D200/D210/D215. (This is known as the synchronized recording mode.)  
Only one AJ-D230H unit can be connected when the synchronized recording mode has been established.
- The synchronized recording mode will not be established when a tape has not been loaded in the AJ-D200/D210/D215. The DVCPRO interface output signals from the AJ-D200/D210/D215 can be recorded by setting the AJ-D230H to the local mode. (This involves setting the LOCAL/MENU/REMOTE switch on the front panel of the AJ-D230H to the LOCAL position.)  
One or two AJ-D230H units can be connected at this time.
- Recording with the AJ-D230H is possible only using the DVCPRO format.
- The DVCPRO interface output channel from the AJ-D200/D210/D215 is fixed at "0." Set the DVCPRO interface input channel to "0" when DVCPRO interface output signals from the AJ-D200/D210/D215 are to be received using the AJ-D230H. Recording with the AJ-D230H is not possible at any other channel setting.
- When mounting the digital video interface board (AJ-YAD230P) onto the AJ-D230H and using in local mode, set No. 805 DIF REC SEL of the setup menu to "ERASE".

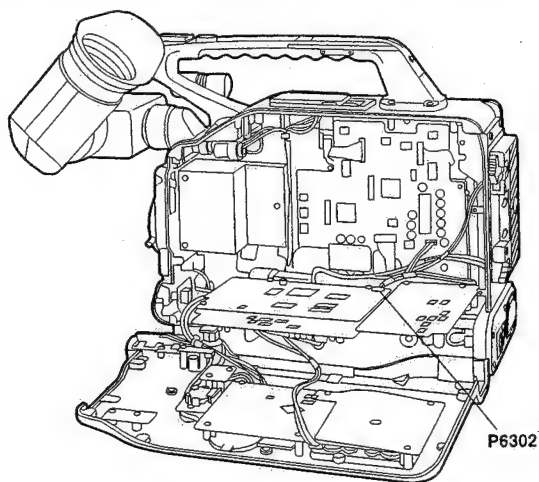
E-16

5. Insert connector **P6305** of the board into connector **P2** on the soldered surface of the VTR MAIN circuit board, and secure it using the 4 screws packed with the product.



E-9

3. Connect the 6-pin connector of the DVCPRO connector unit to connector **P6302** on the board.



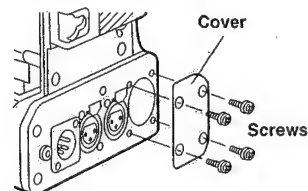
#### ■ Assembly

1. Return the pulled-down board to its original position, and secure it using the 5 red screws and 2 silver screws.
2. Attach the side panel on the operation panel side using the 7 screws.

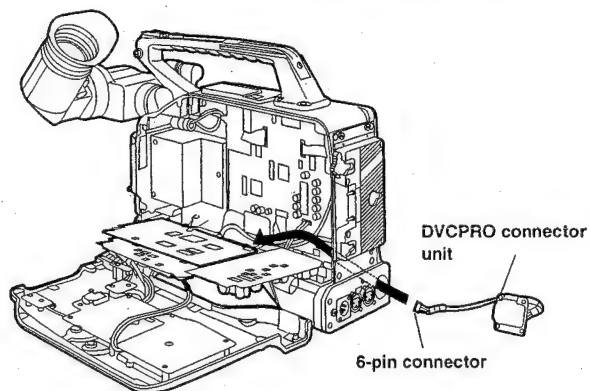
E-11

#### ■ Attaching the DVCPRO connector unit

1. Remove the 4 screws of the jack area on the AJ-D200/D210/D215's rear panel, and remove the cover.



2. Pass the 6-pin connector of the DVCPRO connector unit through the unit as shown in the figure, and secure it using the 4 screws packed with the product.



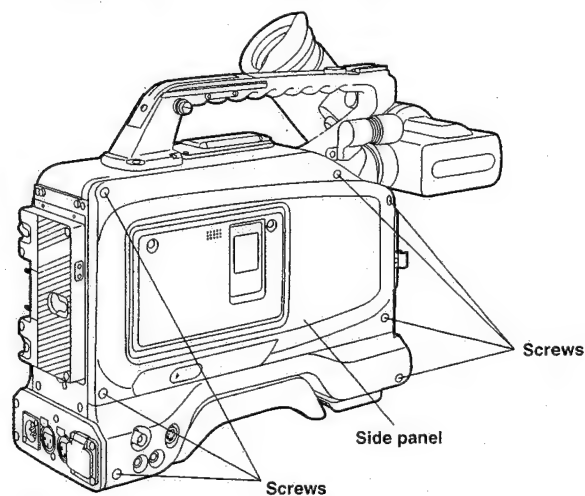
E-10

#### Upgrading the system software

Once the board has been installed in the AJ-D200/D210, proceed to upgrade the system software.

- This is not necessary for the AJ-D215.

1. Remove the 7 screws on the AJ-D200/D210's cassette holder, and remove the side panel.

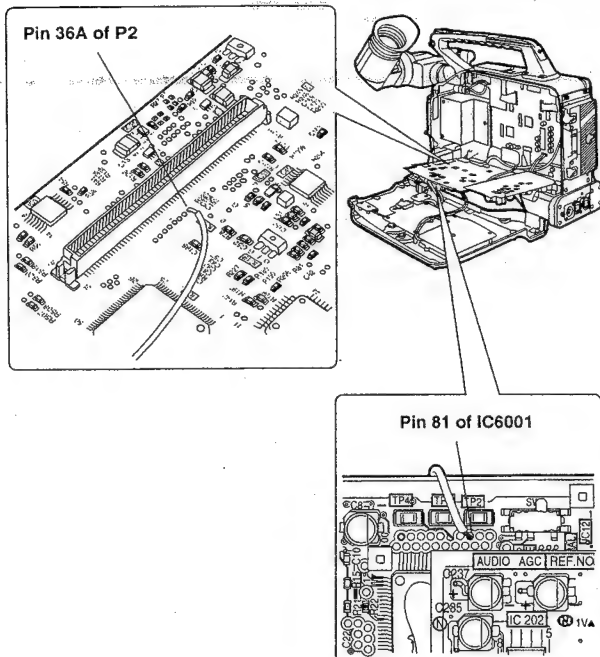


E-12

For the AJ-D200: A jumper wire is added in 2 places.

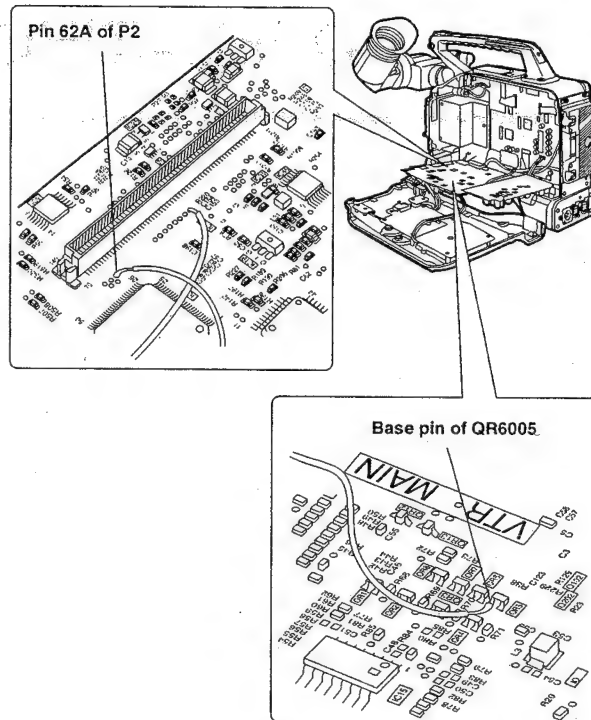
• This is not necessary for the AJ-D215.

3. 1. Solder one of the jumper wires (VEE0F66) between **pin 81** (component surface) of **IC6001** on the VTR MAIN circuit board and **pin 36A** (soldered surface) of **P2**.



E-5

2. Solder the other jumper wire (VEE0F70) between the **base pin** (soldered surface) of **QR6005** on the VTR MAIN circuit board and **pin 62A** (soldered surface) of **P2**.

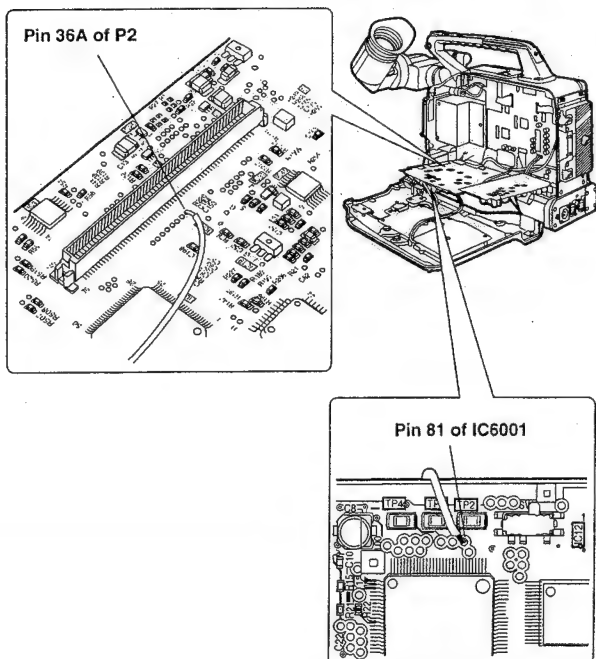


E-6

For the AJ-D210: A jumper wire is added in 1 place.

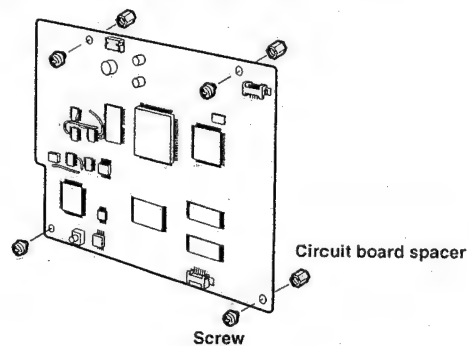
• This is not necessary for the AJ-D215.

3. Solder the jumper wire (VEE0F66) between **pin 81** (component surface) of **IC6001** on the VTR MAIN circuit board and **pin 36A** (soldered surface) of **P2**.



E-7

4. Secure the circuit board spacers to the board using the 4 screws packed with the product.



E-8

# SECTION 1

## OPERATING INSTRUCTIONS

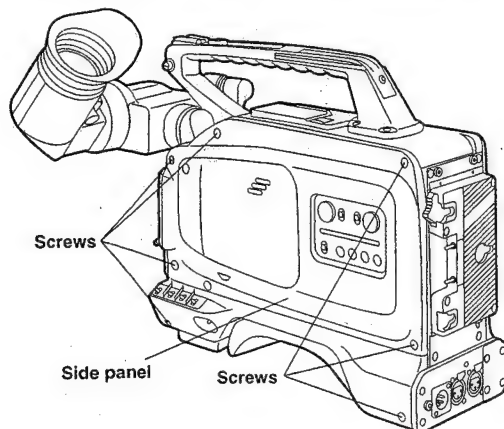
### ***Installing the board in the AJ-D200/D210/D215***

This board must be installed in the AJ-D200/D210/D215 for use. Follow the steps below for installation.

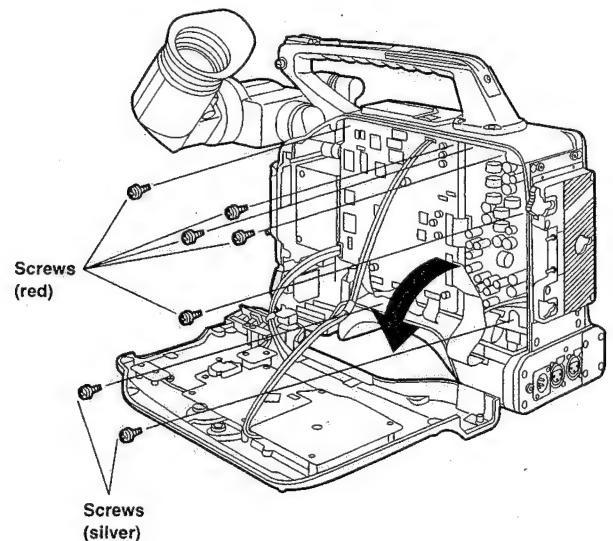
- The AJ-D200/D210/D215's power must be turned off prior to installation.

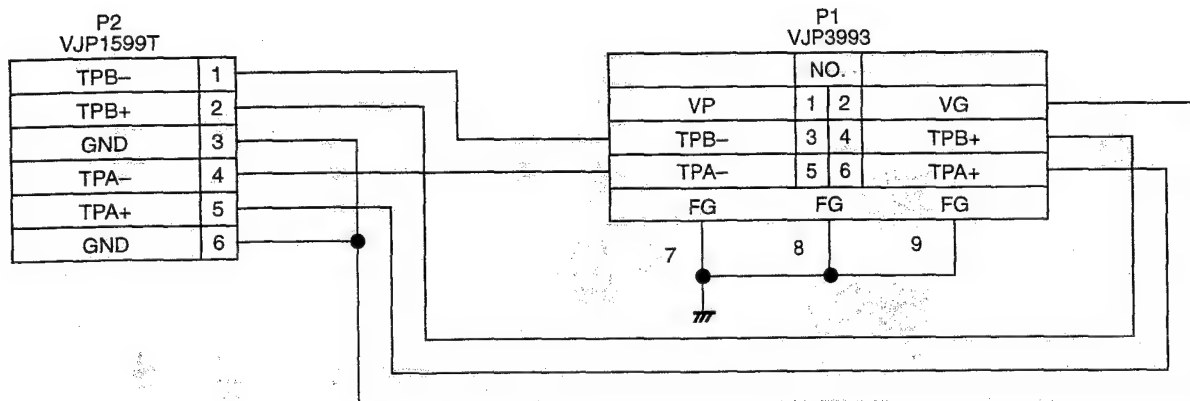
#### ■ Installing the board

1. Remove the 7 screws on the operation panel of the AJ-D200/D210/D215, and remove the side panel.



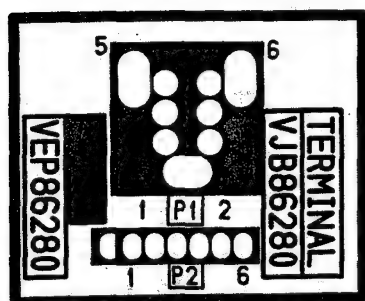
2. Remove the 5 red screws and 2 silver screws, and pull down the board toward you.



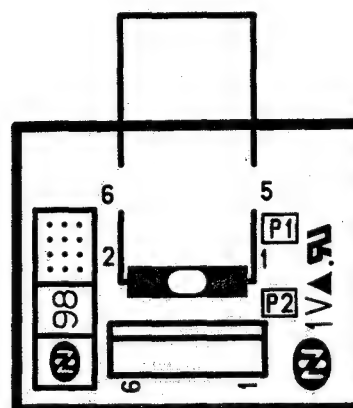


COMPONENT NAME	DVCPRO TERMINAL	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP86280A	AJ-D215HE	
		SCM-007

## DVC PRO TERMINAL P.C.BOARD (VEP86280A)



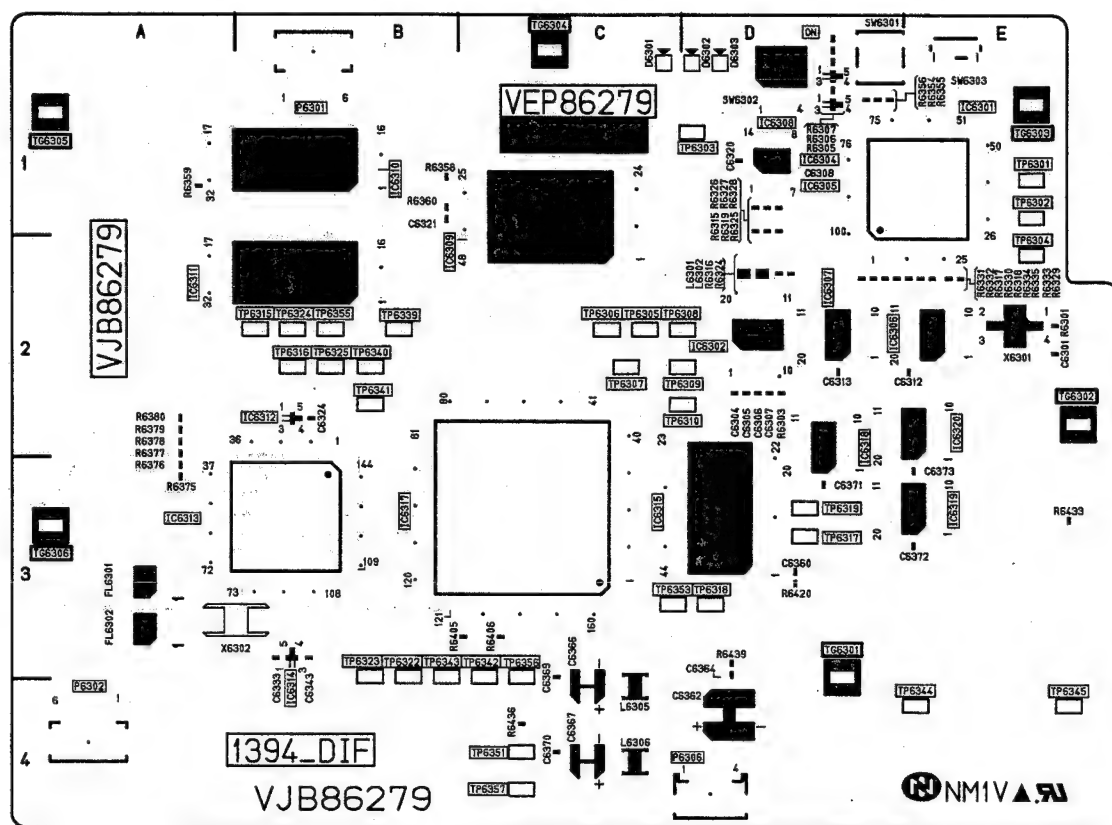
(COMPONENT SIDE)



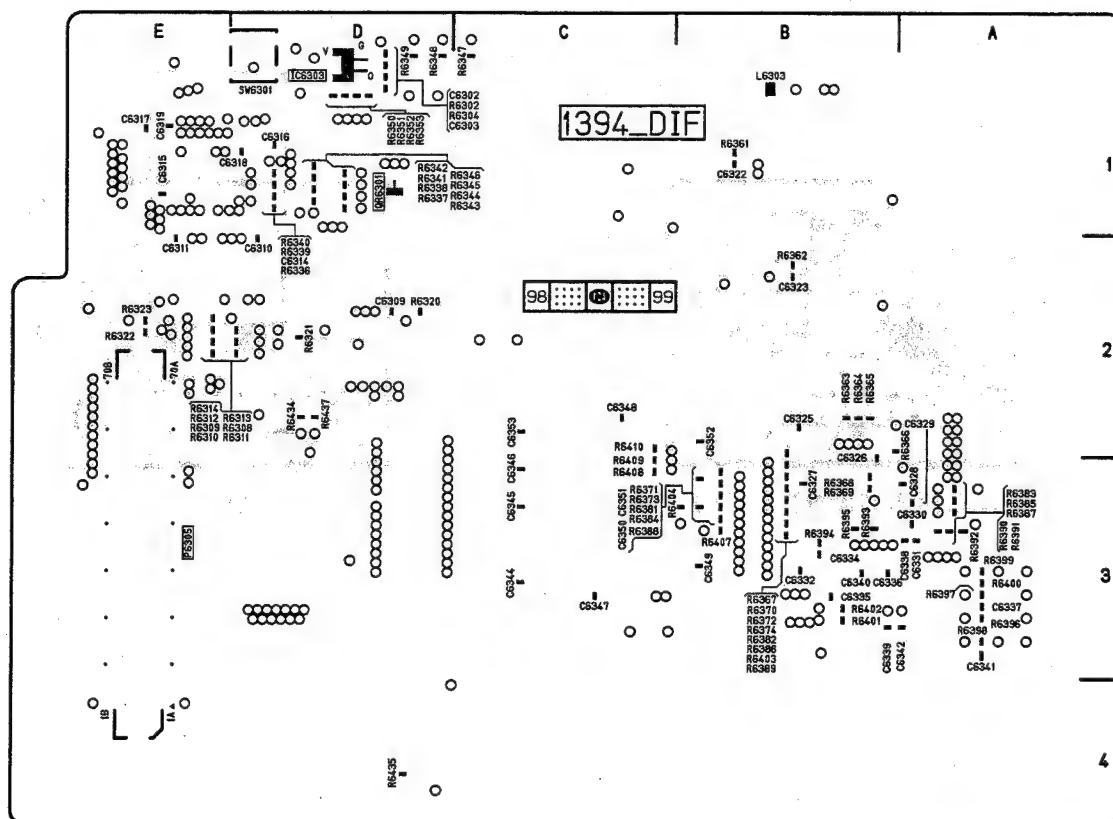
(FOIL SIDE)



**1319 DIF P.C.BOARD (VEP86279A)**



**(COMPONENT SIDE)**



**(FOIL SIDE)**

# SECTION 8

## EXPLODED VIEWS & PARTS LIST

**Note:**

1. \*Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000  
OHMS, all capacitors are in MICROFARADS ( $\mu$ F), P= $\mu$  $\mu$  F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with E on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE  
Components identified with the mark <I> have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.  
After the discontinuation of this assembly in production, it will no longer be available

<<Abbreviations for part>>

<NAME>	<DESCRIPTIONS>
C. CAPACITOR	: CERAMIC CAPACITOR
C. CAPACITOR	CH : CERAMIC CHIP CAPACITOR
E. CAPACITOR	: ELECTROLYTIC CAPACITOR
G. CAPACITOR	: GLASS CAPACITOR
M. CAPACITOR	: MICA CAPACITOR
P. CAPACITOR	: PLASTIC FILM CAPACITOR
S. CAPACITOR	: SEMI-CONDUCTOR CAPACITOR
T. CAPACITOR	: TANTALUM CAPACITOR
TRIMMER	: TRIMMER
C. RESISTOR	: CARBON RESISTOR
F. RESISTOR	: FUSE RESISTOR
M. RESISTOR	: METAL OXIDE RESISTOR
M. RESISTOR	CH : METAL OXIDE CHIP RESISTOR
S. RESISTOR	: SOLID RESISTOR
V. RESISTOR	: VARIABLE RESISTOR
W. RESISTOR	: WIRE WOUND RESISTOR
COMBI. TR-R	: TRANSISTOR-RESISTOR COMBINATION PARTS
COMBI. R-R	: RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R	: CAPACITOR-RESISTOR COMBINATION PARTS
COMBI. C-R-R	: CAPACITOR-RESISTOR-COIL COMBINATION PARTS
P.C. BOARD	: PRINTED CIRCUIT BOARD
W/COMPONENT	: WITH COMPONENT

# CONTENTS

<b>Mechanical Replacement Parts List &amp; Exploded Views</b> .....	PRT-1
Mechanical Chassis Assembly (1).....	PRT-1
Mechanical Chassis Assembly (2).....	PRT-3
Frame Assembly (1).....	PRT-5
Frame Assembly (2).....	PRT-7
Cassette Compartment Assembly.....	PRT-9
EVF Assembly.....	PRT-11
Packing Parts Assembly.....	PRT-13
<b>Electrical Replacement Parts List</b> .....	PRT-14

## SERVICING FIXTURES & TOOLS

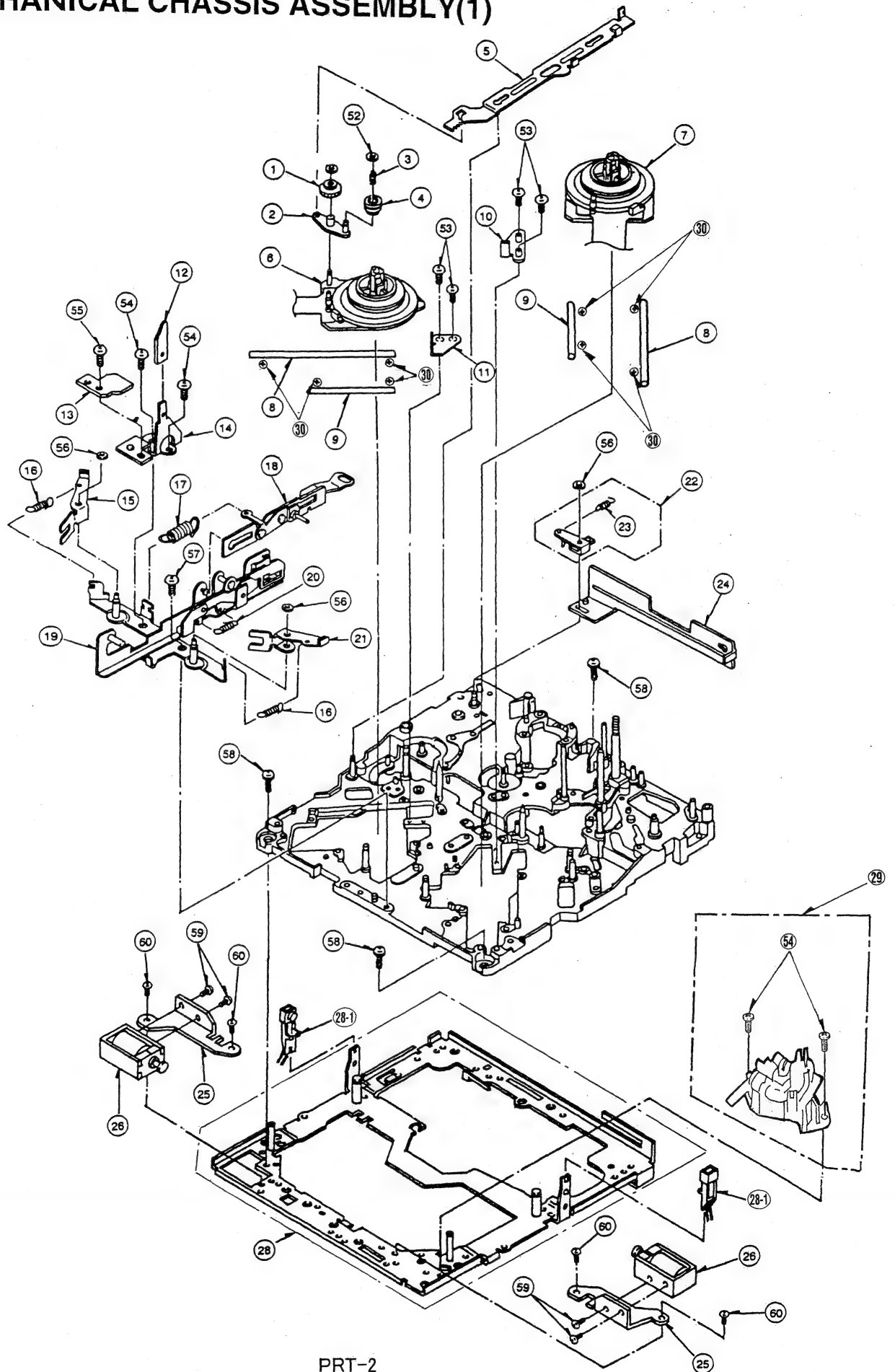
AJ-D215P/HE D200P/E

[illegible]

AJ-D215P/HE\_D200P/E

PRT-1

# MECHANICAL CHASSIS ASSEMBLY(1)



Components identified with the mark  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

## MECHANICAL CHASSIS ASSEMBLY(2)

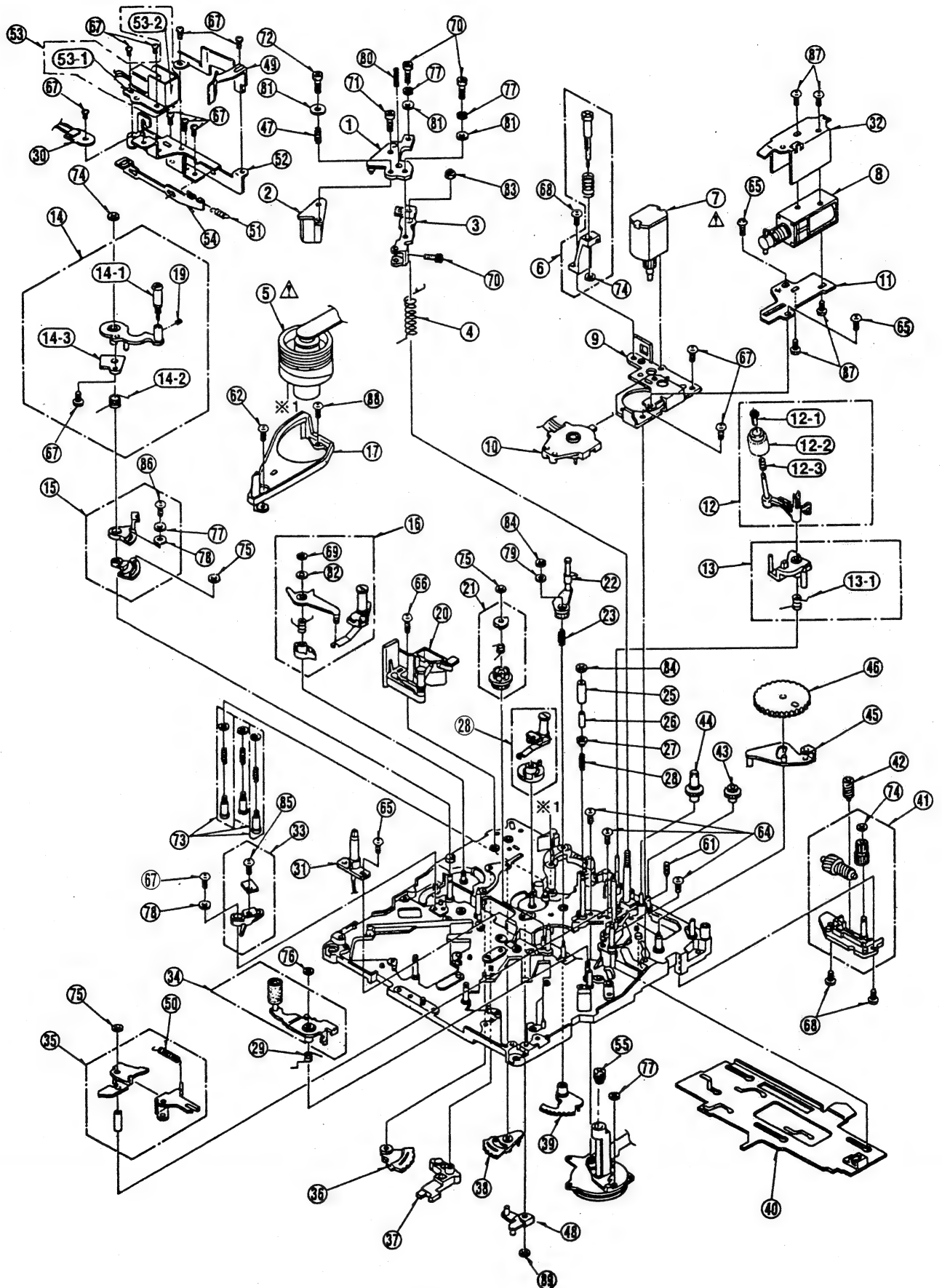
AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA5554	A/C HEAD BASE (1) ASS'Y	1	
2	VED0419	A/C HEAD	1 (M)	
3	VXA6067	A/C HEAD BASE (2) ASS'Y	1	
4	VMB2935	A/C HEAD HEIGHT SPRING	1	
5	VEG1499	CYLINDER UNIT	1 (M)	
6	VXA5715	EMERGENCY SHIFT HOLDER ASS'Y	1	
7	VEM0645	LOADING MOTOR (1)A ASS'Y	1 (M)	
8	VJS0227	PINCH SOLENOID	1 (M)	
9	VXA5584	MOTOR ANGLE ASS'Y	1	
10	VES0918	MODE SW ASS'Y	1 (M)	
11	VMA0A35	PINCH SOLENOID BASE	1	
12	VXL2924	CLEANING ARM A ASS'Y	1 (M)	
12-1	VMX2150	CLEANER ROLLER HOLDER	1	
12-2	VXP1963	CLEANER ROLLER ASS'Y	1	
12-3	VMB3114	CLEANER ROLLER SPRING	1	
13	VXL2870	T2 ARM ASS'Y	1	
13-1	VMB3304	T2 ARM SPRING	1	
14	VXL2831	TENSION ARM A ASS'Y	1 (M)	
14-1	VXP1761	TENSION ROLLER	1	
14-2	VMB3220	TENSION LEG SPRING	1	
14-3	VXA6173	MAGNET HOLDER ASS'Y	1	
15	VXA5791	TENSION LEG SPRING HOOK ASS'Y	1	
16	VXL2709	S1 LOADING ARM ASS'Y	1 (M)	
17	VMD2533	LOADING RAIL	1	
18	VXA6378	T1 BOAT ASS'Y	1 (M)	
19	VHD0561	HEX SCREW	1	
20	VXA6052	S POST BASE A ASS'Y	1 (M)	
21	VXP1683	T4 CONNECTION GEAR ASS'Y	1	
22	VXL2772	T4 ARM ASS'Y	1	
23	VMB2950	T4 THRUST SPRING	1	
24	VXL2898	T LOADING ARM N ASS'Y	1	
25	VMS5906	T3 UPPER FRANGE	1	
26	VMS5905	T3 SLEEVE	1	
27	VMS5904	T3 LOWER FRANGE	1	
28	VMB2929	T3 SPRING	1	
29	VMB2933	PINCH RELEASE SPRING	1	
30	VEK7927	INSULATION SENSOR	1	
31	VEK7691	LED HOLDER P.C.BOARD	1	
32	VMA9411	PINCH SOLENOID ANGLE	1	
33	VXA5820	TENSION SENSOR ASS'Y	1	
34	VXL2835	PINCH ARM ASS'Y	1 (M)	
35	VXL2588	PINCH GUIDE ARM ASS'Y	1	
36	VXA5570	T SECTOR GEAR ASS'Y	1	
37	VXL2838	TENSION LEG. GUIDE ARM	1	
38	VXA5567	S SECTOR GEAR ASS'Y	1	
39	VXA5564	T4 SECTOR GEAR ASS'Y	1	
40	VXA6348	MAIN ROD ASS'Y	1	
41	VXA5627	THRUST SHAFT HOLDER ASS'Y	1	
42	VDG1166	MOTOR WARM GEAR	1	
43	VDG1268	MOTOR EMERGENCY GEAR A(A)	1	
44	VDG1267	MOTOR EMERGENCY GEAR B(A)	1	
45	VXL2889	MAIN CAM ARM ASS'Y	1	
46	VDG1168	MAIN CAM GEAR	1 (M)	
47	VMB2937	A/C HEAD ADJUST SPRING	1	
49	VMD3475	T1 GUIDE ASS'Y	1	
50	VMB2934	SPRING	1	
51	VMB3051	CLEANER RETURN SPRING	1	
48	VXL2600	EJECT ARM ASS'Y	1	
52	VXA6077	CLEANER BASE 1 ASS'Y	1	
53	VXA6078	CLEANER SOLENOID ASS'Y	1	
53-1	VJS0226	CLEANER SOLENOID	1 (M)	
53-2	VMA9877	CLEANER SOLENOID BASE	1	
54	VMA0429	CLEANER INSULATION	1	
55	VX00556	THRUST SCREW ASS'Y	1 (M)	
58	VMT0871	SILENCER PAD A	1	
61	VHD0356	SCREW	1	
62	XQN2+A3	SCREW	1	
64	XQN2+A35FZ	SCREW	3	
65	XQN2+AM2	SCREW	3	
66	XQN2+AM4	SCREW	1	
67	XQN2+CF3	SCREW	12	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
68	XQN2+CF4	SCREW	1	
69	XUC12FP	E-RING	2	
70	XVE2B4FZ	HEX SCREW	3	
71	XVE2B6FP	HEX SCREW	1	
72	XVE2B12FP	HEX SCREW	1	
73	VX00439	SCREW	3	
74	VMX0967	CUT WASHER	2	
75	VMX1061	WASHER	3	
76	VMX1079	CUT WASHER	1	
77	XWA2B	WASHER	4	
78	XWE2	WASHER	1	
79	XWE16VW	WASHER	1	
80	XXE2A6FP	HEX SCREW	1	
81	XWG2	WASHER	2	
82	XWGV15Z32G	WASHER	2	
83	VHD0045	NYLON NUT	1	
84	VHN0312	NUT	2	
85	XQN2+A03.5FZ	SCREW	1	
86	XQN2+AJ5	SCREW	1	
87	XQN2+A15	SCREW	4	
88	XQN2+A4	SCREW	1	
89	VMX1394	CUT WASHER	1	
*	VXY1433	MECHANISM	1	(M)FOR AJ-D215P/HE
*	VXY1264	MECHANISM	1	(M)FOR AJ-D200P
*	VXY1287	MECHANISM	1	(M)FOR AJ-D200HE

Components identified with the mark  $\triangle$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

## MECHANICAL CHASSIS ASSEMBLY(2)

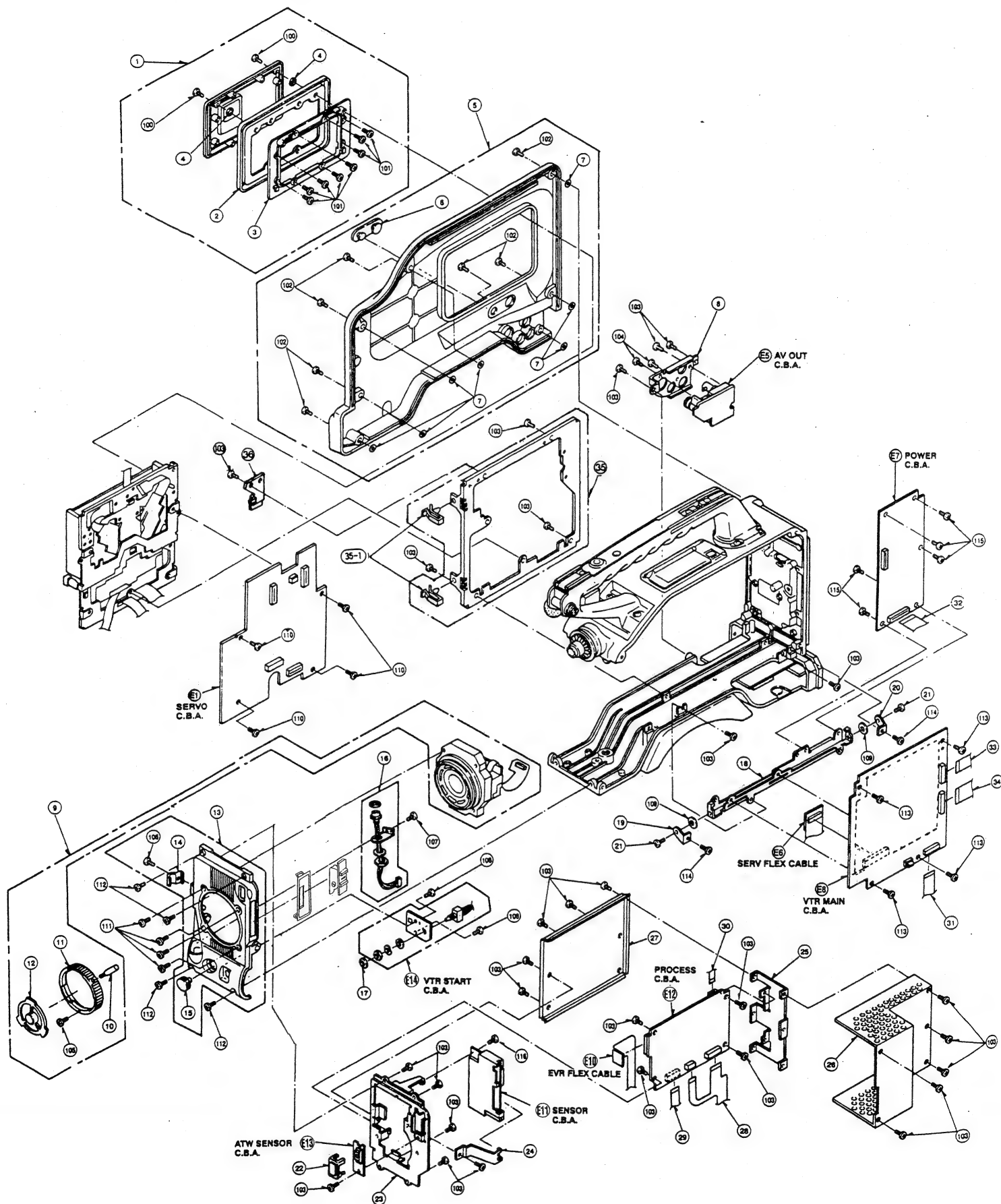




## A.J-D215P/HE D200P/E

PRT-5

# FRAME ASSEMBLY(1)



Components identified with the mark  $\Delta$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

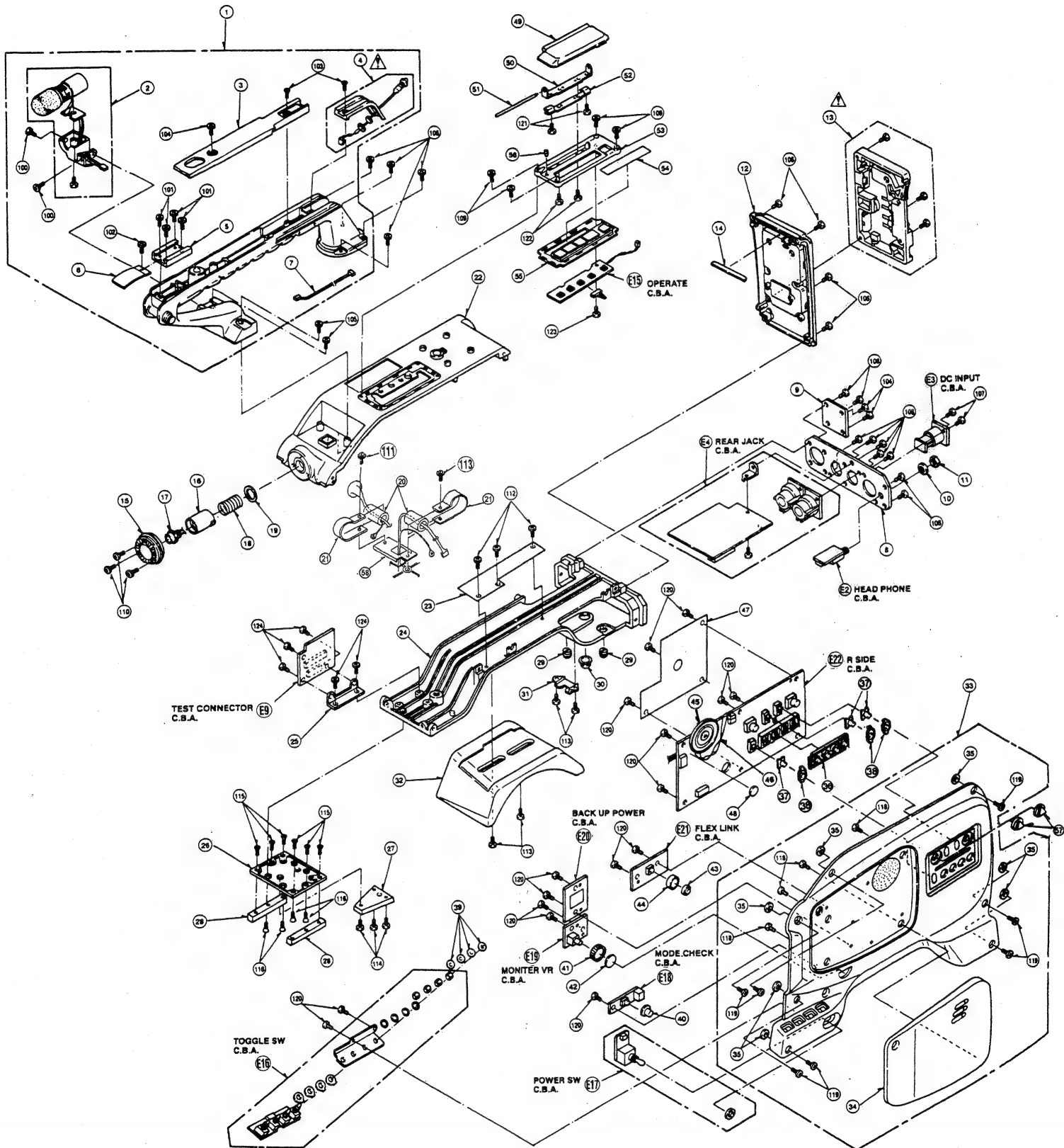
AJ-D215P/HE\_D200P/E

## FRAME ASSEMBLY(2)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYH0259	HANDLE	1		110	XYN26+K16FZ	SCREW	4	
2	VEK6714	MIC ASS'Y	1		112	XSB3+4	SCREW	3	
3	VKF2721	HANDLE COVER	1		113	XYN3+F8	SCREW	2	
$\Delta$ 4	VYF1888	TALLY COVER	1		114	XSB4+6FC	SCREW	3	
5	V5MA0046A4	CAMERA SHOE	1		115	XTS26+6J	SCREW	6	
6	4G28145	SPRING	1		116	XSS3+8FZ	SCREW	4	
7	VEE0A89	MIC CABLE	1		117	XYN26+C8FZ	SCREW	2	
8	VJH0986	JACK PLATE	1		118	XTV3+6GFZ	SCREW	4	
9	VG0689	BLANK PLATE	1		119	XSB3+10FZ	SCREW	7	
10	VMX0531	CLATCH SPACER	1		120	XYN3+K6RS	SCREW	2	
11	VHN0194	SPACER	1		121	XTB26+4FFZ	SCREW	2	
12	VGM1058	REAR CASE	1		122	XTV26+5F	SCREW	2	
$\Delta$ 13	VJF1347	BATTERY HOLDER	1		123	XTN2+5J	SCREW	1	
14	VG0515	BATTERY CABLE HOLDER	1						
15	VG03454	EVF HOLD BASE	1						
16	VG03455	EVF CONNECTOR HOLDER	1						
17	VEE0A87	EVF CABLE	1						
18	VMB2224	TENSION SPRING	1						
19	VG0514	VF CONNECTOR HOLDER PLATE	1						
20	VLP0186	FERRITE CORE	2						
21	VJF0980	CLAMPER	2						
22	VGM1057	TOP CASE	1						
23	VG04441	FLEXIBLE HOLDER	1						
24	VGM1390	BOTTOM CASE	1						
25	VMP5375	C.B.A. ANGLE	1						
26	VGM1277	FRONT FOOT BASE	1						
27	VGM1278	FRONT V EDGE	1						
28	VKA0299	FRONT FOOK	2						
29	VMG0954	REAR FOOT	2						
30	VMG0643	BRAKER CAP	1						
31	VMP4896	BACK LOCK ANGLE	1						
32	VMT0768	SHOLDER PAD	1						
33	YYP7269	SIDE CASE (R) 1 ASS'Y	1	FOR AJ-D215P					
33	YYP6505	SIDE CASE (R) 1 ASS'Y	1	FOR AJ-D200P					
33	YYP7270	SIDE CASE (R) 1 ASS'Y	1	FOR AJ-D215HE					
33	YYP6654	SIDE CASE (R) 1 ASS'Y	1	FOR AJ-D200HE					
34	VMT0826	FACE PAD	1						
35	VMX1558	NYLON WASHER	7						
36	VG03415	OPERATION BUTTON HOLDER	1						
37	VGU6028	SLIDE KNOB (A)	3						
38	VMG0947	SLIDE KNOB RUBBER	3						
39	VMG0646	WATERPROOF SW INSULATION SHE	4						
40	VGU4906	MODE CHECK BUTTTON	1						
41	VGU5694	VR KNOB	1						
42	VGH3360	VR KNOB CAP A	1						
43	VGU6511	PUSH BUTTON	1						
44	VG03417	PUSH BUTTON HOLDER A	1						
45	EAS2P104N	SPEAKER	1						
46	VEE0A98	SPEAKER CABLE	1						
47	VSC4659	OPERATION SHIELD PLATE	1						
48	VMT0539	CUSHION	1						
49	VKW1642	KEY BOARD DOOR	1						
50	VMP3736	DOOR ANGLE	1						
51	VMS4947	OPERATION SHAFT	1						
52	VMC0883	DOOR SPRING	1						
53	VGK2058	KEY OPERATION PANEL	1						
54	VGH4193	KEY BOARD PLATE	1						
55	VGU6577	KEY BOARD BUTTON	1						
56	VMG0657	CUSHION RUBBER	1						
57	VGU6512	VR KNOB	2	FOR AJ-D215P/HE					
58	VMP4579	FERRITE CORE FIXING METAL	1						
100	XSB3+8FZ	SCREW	2						
101	XSN2+6FZ	SCREW	4						
102	XSN26+4FC	SCREW	1						
103	XSS3+6FZ	SCREW	2						
104	XSB3+6FZ	SCREW	3						
105	XSB4+16FZS	SCREW	2						
106	XSB3+8FZ	SCREW	4						
107	XSN26+6FC	SCREW	2						
108	XSN26+6FZ	SCREW	5						
109	XSB2+6FZ	SCREW	4						

Components identified with the mark  $\triangle$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

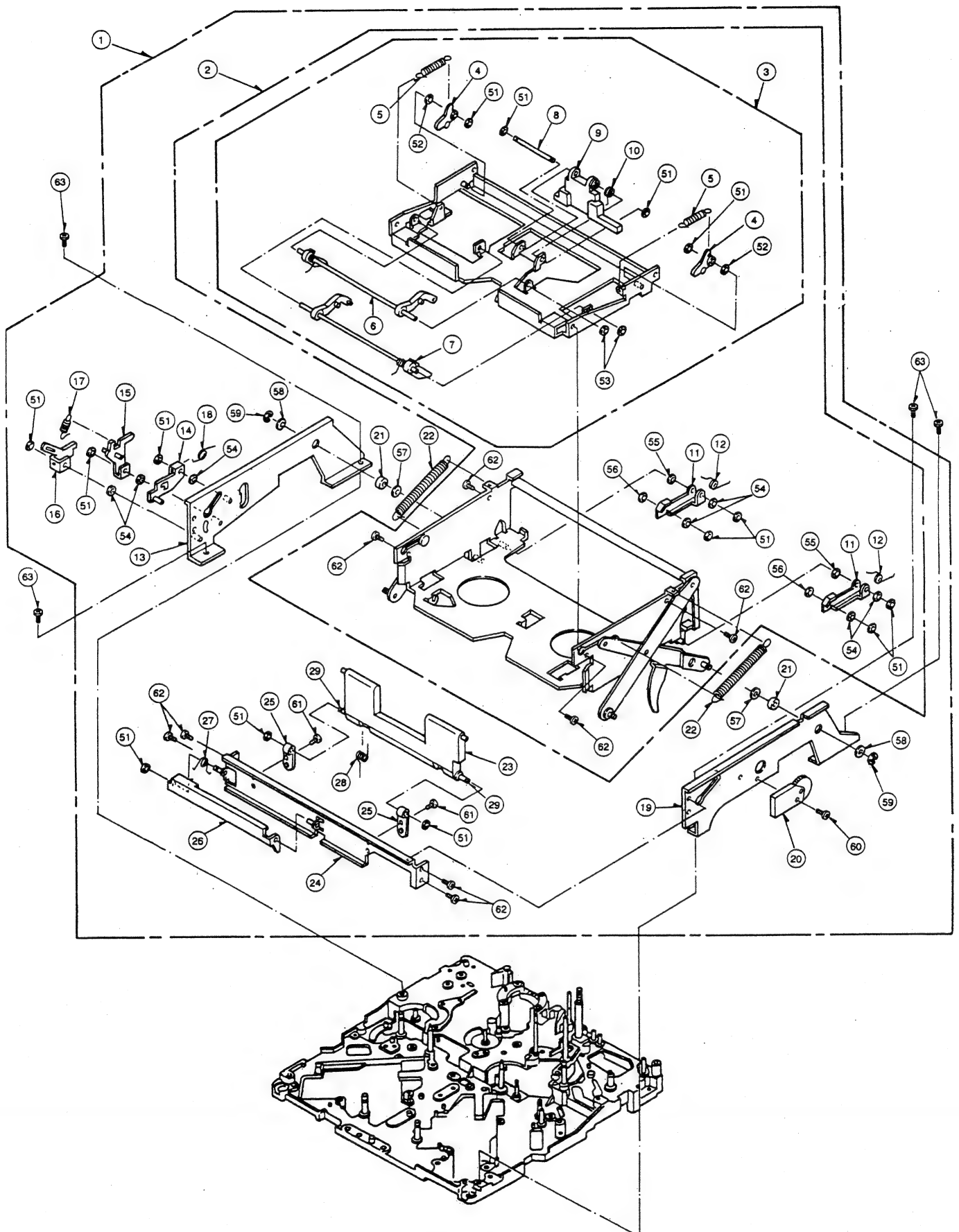
## FRAME ASSEMBLY(2)




AJ-D215P/HE D200P/E

PRT-9

# CASSETTE COMPARTMENT ASSEMBLY




Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.

## EVF ASSEMBLY

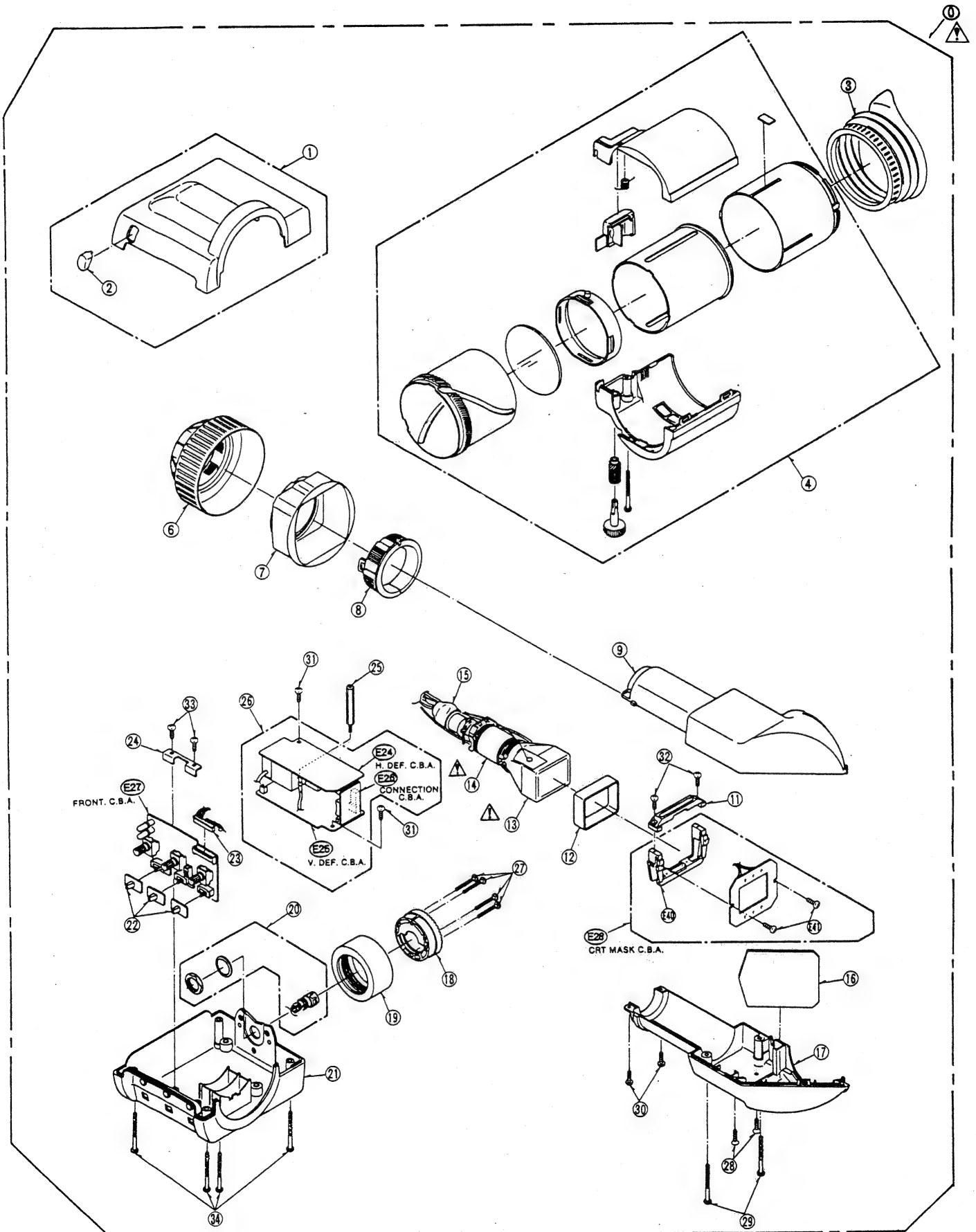
AJ-D215P/HE D200P/E


Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	0	VEQ1710	1	1.5" EVF ASS'Y					
1	0	VEQ1549	1	1.5" EVF ASS'Y					
1		VYK6467	1	EVF MAIN CASE UPPER ASS'Y					
1		VYK6102	1	EVF MAIN CASE UPPER ASS'Y					
2		VGP3621	1	TALLY LAMP COVER					
3		VMG0799	1	RUBBER CAP					
4		VYC0608	1	EYECAP PIECE ASS'Y					
6		VGP3619	1	LOCK RING (OUT)					
7		VMX2305	1	LOCK RING SPACER					
8		VGP3620	1	LOCK RING (IN)					
9		VYK7856	1	CRT CASE UPPER					
11		VJF0899	1	CRT HOLDER (2)					
12		VMX1899	1	CRT SPACER					
13		M04KYS07WB	1	CRT					
14		ELY15V114G	1	DEFLECTION YOKE					
15		VEK7034	1	CRT SOCKET					
16		VDL0417	1	MIRROR					
17		VYK7857	1	CRT CASE BOTTOM					
18		VG03433	1	EVF GEAR					
19		VMP3385	1	EVF FIX. RING					
20		VEK7037	1	EVF INTERFACE CABLE					
21		VGM1143	1	VF BOTTOM CASE					
22		VGU3364	3	SLIDE KNOB					
23		VEE8849	1	FRONT CABLE					
24		VMP4283	1	C.B.A. HOLDER					
25		VMX2308	1	SPACER					
27		XYN3+C14FZ	4	SCREW					
28		XTS2+6GFZ	2	SCREW					
29		XTN3+25GFZ	2	SCREW					
30		XTN2+6G	2	SCREW					
31		XYN26+K6FR	2	SCREW					
32		XTN2+10G	2	SCREW					
33		XTN3+6G	2	SCREW					
34		XTN3+28GFZ	4	SCREW					



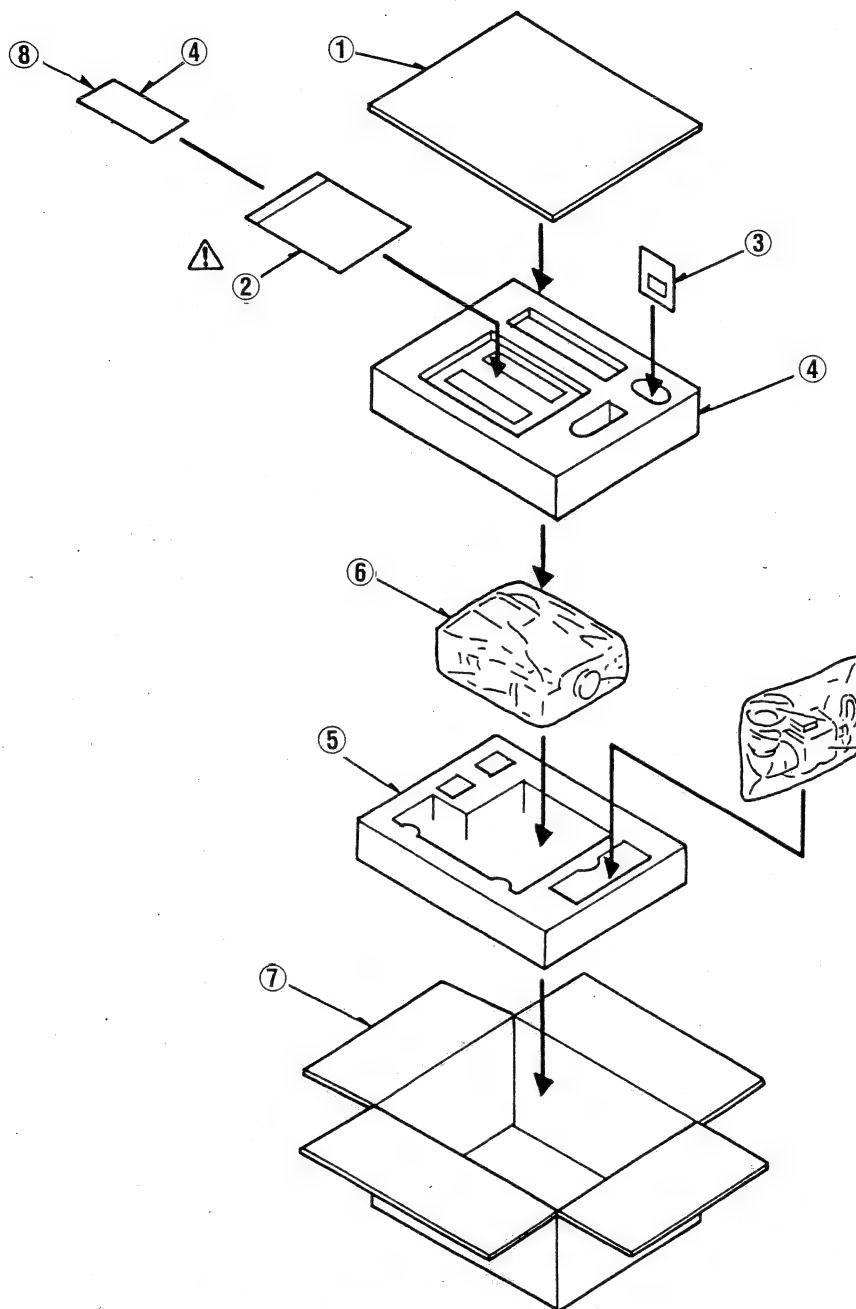
Components identified with the mark  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

## EVF ASSEMBLY








Components identified with the mark  have the special characteristics for safety.  
When replacing any of these components, use only the same type.

## PACKING PARTS ASSEMBLY



## PACKING PARTS ASSEMBLY

AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VPN3922	TOP PAD	1						
 2	VQT8067	OPERATING INSGRUCTIONS	1	FOR AJ-D215P					
 2	VQT7073	OPERATING INSGRUCTIONS	1	FOR AJ-D200P					
 2	VQT8068	OPERATING INSTRUCTIONS	1	FOR AJ-D215HE					
 2	VQT7074	OPERATING INSGRUCTIONS	1	FOR AJ-D200P (FRENCH)					
 2	VQT7284	OPERATING INSGRUCTIONS	1	FOR AJ-D200HE					
3	VEJ1672	BATTERY ADAPTOR ASS'Y	1						
4	VPN4613	CUSHION (UPPER)	1						
5	VPN4614	CUSHION (LOWER)	1						
6	VPF0724	POLYETHYLENE BAG	1	FOR AJ-D215P/D200P					
6	VPF0884	POLYETHYLENE BAG	1	FOR AJ-D215HE/D200HE					
7	VPG9925	PACKING CASE	1	FOR AJ-D215P/HE					
7	VPG8916	PACKING CASE	1	FOR AJ-D200P					
7	VPG8917	PACKING CASE	1	FOR AJ-D200HE					

# ELECTRICAL REPLACEMENT PARTS LIST

AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP82223A	SERVO P.C.BOARD	1	(RTL)FOR AJ-D215P/HE
■ E1	VEP82212A	SERVO P.C.BOARD	1	(RTL)FOR AJ-D200P
■ E1	VEP82212B	SERVO P.C.BOARD	1	(RTL)FOR AJ-D200HE
■	VEP80B09A	VM.LIMIT P.C.BOARD	1	(RTL)FOR VEP82212A/B
■ E2	VEP00W08B	HEAD PHONE P.C.BOARD	1	(RTL)
■ E3	VEP80A44A	DC INPUT P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E3	VEP00X87C	DC INPUT P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E4	VEP84297B	REAR JACK P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E4	VEP84297C	REAR JACK P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E5	VEP80A43A	AV OUT P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E5	VEP80A75A	AV OUT P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E6	VEP00Y56A	SERVO FLEX P.C.BOARD	1	(RTL)
■ E7	VEP81179A	POWER P.C.BOARD	1	(RTL)
■ E8	VEP83356D	VTR MAIN P.C.BOARD	1	(RTL)FOR AJ-D215P
■ E8	VEP83356E	VTR MAIN P.C.BOARD	1	(RTL)FOR AJ-D215HE
■ E8	VEP83356A	VTR MAIN P.C.BOARD	1	(RTL)FOR AJ-D200P
■ E8	VEP83356B	VTR MAIN P.C.BOARD	1	(RTL)FOR AJ-D200HE
■ E9	VEP86258A	TEST PLUG P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E9	VEP86258B	TEST PLUG P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E10	VEP00Y55A	EVR FLEX P.C.BOARD	1	(RTL)
■ E11	VEP22146A	SENSOR P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E11	VEP22251B	SENSOR P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E12	VEP23285B	PROCESS P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E12	VEP23422B	PROCESS P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
■ E13	VEP80A32A	ATW SENSOR P.C.BOARD	1	(RTL)
■ E14	VEP00U25B	VTR START P.C.BOARD	1	(RTL)
■ E15	VEP86143B	OPERATE P.C.BOARD	1	(RTL)
■ E16	VEP80A15A	TOGGLE SW P.C.BOARD	1	(RTL)
■ E17	VEP80A16A	POWER SW P.C.BOARD	1	(RTL)
■ E18	VEP80A17A	MODE CHECK P.C.BOARD	1	(RTL)
■ E19	VEP80A18A	MONITOR VR P.C.BOARD	1	(RTL)
■ E20	VEP80A19A	BACK UP P.C.BOARD	1	(RTL)
■ E21	VEP80A21A	FLEX RING P.C.BOARD	1	(RTL)
■ E22	VEP86264A	R SIDE P.C.BOARD	1	(RTL)FOR AJ-D215P/HE/D200HE
■ E22	VEP86259A	R SIDE P.C.BOARD	1	(RTL)FOR AJ-D200P
■ E23	VEP27086A	H DEF P.C.BOARD	1	(RTL)
■ E24	VEP27087A	V DEF P.C.BOARD	1	(RTL)
■ E25	VEP27088A	CN P.C.BOARD	1	(RTL)
■ E26	VEP27089A	FRONT P.C.BOARD	1	(RTL)
■ E27	VEP27090C	CRT MASK P.C.BOARD	1	(RTL)
■ E28	VEP86286A	PRE SHUFFLE P.C.BOARD	1	(RTL)FOR AJ-D215HE
■ E28	VEP83357A	PRE SHUFFLE P.C.BOARD	1	(RTL)FOR AJ-D200HE
■ E29	VEP86280A	DVC PRO TERMINAL P.C.BOARD	1	(RTL)FOR AJ-D215HE

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP82223A	SERVO P.C.BOARD	1	(RTL)FOR AJ-D215P/HE
■ E1	VEP82212A	SERVO P.C.BOARD	1	(RTL)FOR AJ-D200P
■ E1	VEP82212B	SERVO P.C.BOARD	1	(RTL)FOR AJ-D200HE
■	VEP80B09A	VM.LIMIT P.C.BOARD	1	(RTL)FOR VEP82212A/B
C1	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	FOR VEP80B09A
C100, 01	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	2	
C103	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C107	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C108	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C109	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C110	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C111	ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C113	VCE0180	E.CAPACITOR	1	
C116	VCE0180	E.CAPACITOR	1	
C119-21	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	
C123	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C124	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C125	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C126	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C127	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C128	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C129	ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C130	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C133	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C134	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
C135	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C137, 38	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C139	ECEV1EV220Q	E.CAPACITOR CH 25V 22U	1	
C140, 41	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C143	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
C144-46	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C147	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	1	
C200-04	VCE0180	E.CAPACITOR	5	
C207	ECEVOJV220Q	E.CAPACITOR CH6.3V 22U	1	
C208-10	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C211	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C212, 13	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C217	ECEVOJV220Q	E.CAPACITOR CH6.3V 22U	1	
C218-20	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C221, 22	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C223	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C224	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C228-30	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C234-36	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C240	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C241	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C242	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C243	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C244	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C245	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C246-48	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	3	
C250	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
C251	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C252	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C253	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C254	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C255	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C256	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C304, 05	VCE0180	E.CAPACITOR	2	
C307, 08	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C309	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C310	VCC0037F432	C.CAPACITOR 432P	1	
C311	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C312	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C318, 19	VCE0180	E.CAPACITOR	2	
C321	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C322	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C323	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C324, 25	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C326	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C327-29	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C330	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C331	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	1		D801-03	MA142WK	DIODE	3	
C332	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		D807	MA142WK	DIODE	1	
C333	ECEV1EV4R7Q	E. CAPACITOR CH 25V 4.7U	1		D811, 12	MA142WK	DIODE	2	
C334, 35	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2		D813	21D004	DIODE	1	
C336	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		D814-16	MA142WK	DIODE	3	
C337-39	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		D817-28	MA738	DIODE	12	
C340-42	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3		D829	NS003A04	DIODE	1	
C343-46	ECEV1EV4R7Q	E. CAPACITOR CH 25V 4.7U	4		D830	MA8051-H	DIODE	1	
C349	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		D831, 32	NS003A04	DIODE	2	
C351	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		D833	MA142WK	DIODE	1	
C353, 54	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	2		D834	MA8030-H	DIODE	1	FOR VEP82223A
C357-59	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	3		D835	MA142WK	DIODE	1	FOR VEP82223A
C401-04	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	4		D836	MA738	DIODE	1	FOR VEP82223A
C407-10	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	4		D837	MA142WK	DIODE	1	FOR VEP82223A
C411-13	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3						
C414-16	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3		IC1	TA75W393FU	IC	1	FOR VEP80B09A
C418	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC100	MN6755486AH	IC	1	FOR VEP82223A
C419	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		IC100	MN6755486H8E	IC	1	FOR VEP82212A/B
C420	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC101	SC371025AVFU	IC	1	
C422-25	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	4		IC103	UPC4556G2	IC	1	
C432	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1		IC104	MN13821-Y	IC	1	
C433	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC105	TC7W04FU	IC	1	
C434	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC110	XC62AP3002P	IC	1	
C435	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		IC200, 01	AN3890FBS	IC	2	
C504	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1		IC202, 03	MDC05	IC	2	
C506	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		IC204, 05	NJM2904M	IC	2	
C507	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC207	NJM2904M	IC	1	
C508-11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4		IC208	TA75W393FU	IC	1	
C514	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		IC209	NJM2904M	IC	1	
C515	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC210, 11	TA75W393FU	IC	2	FOR VEP82223A
C517	ECEV1HV3R3Q	E. CAPACITOR CH 50V 3.3U	1		IC301	TL1451CNS	IC	1	
C518, 19	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	2		IC302, 03	AN3841SR	IC	2	
C702	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1		IC401, 02	TA75W393FU	IC	2	
C703	ECEV1EV4R7Q	E. CAPACITOR CH 25V 4.7U	1		IC403	NJM2904M	IC	1	
C704	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		IC404	MC14013BF	IC	1	
C705	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1		IC406, 07	UPC4558G2	IC	2	
C706, 07	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2		IC409, 10	NJM2904M	IC	2	
C801	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		IC501	MN6755486AJ	IC	1	FOR VEP82223A
C804-08	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	5		IC501	MN6755486H8P	IC	1	FOR VEP82212A/B
C809	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1		IC502	TC7W04FU	IC	1	
C810, 11	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2		IC503	TA75W393FU	IC	1	
C812, 13	ECA12HG472L	E. CAPACITOR 4700U	2		IC701	TA75W393FU	IC	1	
C817	ECEV1EV4R7Q	E. CAPACITOR CH 25V 4.7U	1		IC702	BA6219BFP-Y	IC	1	
C818, 19	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	FOR VEP82223A	IC801	MC14538BF	IC	1	
C820	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	FOR VEP82223A	IC802	NJM2904M	IC	1	
C821-23	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3	FOR VEP82223A	IC803	MC14538BF	IC	1	
C825	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	FOR VEP82223A	IC804	MC74HC11F	IC	1	
C842	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	FOR VEP82223A	IC805	MC14049UBF	IC	1	
C903-05	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	3		IC807	NJM2904M	IC	1	FOR VEP82223A
C906	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1		IC808, 09	MC14538BF	IC	2	FOR VEP82223A
D100	MA142K	DIODE	1		L101	VL00319K101	COIL	100UH	1
D101, 02	MA143	DIODE	2		L102-04	VL00319K100	COIL	10UH	3
D103	MA736	DIODE	1		L200	VL00407120M	COIL	12UH	1
D200, 01	MA143	DIODE	2		L201, 02	VL00407151K	COIL	150UH	2
D202	MA728	DIODE	1		L301	VL00214	COIL		1
D203	MA736	DIODE	1		L302, 03	VL00407151K	COIL	150UH	2
D204	MA728	DIODE	1		L501	VL00319K100	COIL	10UH	1
D205	MA736	DIODE	1		L701	VL00319K101	COIL	100UH	1
D206, 07	MA8047-H	DIODE	2		P1	VJP3949C080H	CONNECTOR (MALE)		1
D301	MA728	DIODE	1		P2	VJP3949A080H	CONNECTOR (MALE)		1
D302	MA736	DIODE	1		P600	VJP3172D003	CONNECTOR (MALE)		1
D303	MA728	DIODE	1		P601	VJP3172D002	CONNECTOR (MALE)		1
D304	MA736	DIODE	1		P602	VJP3172D004	CONNECTOR (MALE)		1
D401	MA736	DIODE	1		P603	VJP3172D002	CONNECTOR (MALE)		1
D402-05	MA143	DIODE	4		P604	VJP3172D003	CONNECTOR (MALE)		1
D406	MA736	DIODE	1		P605	VJP3518B002	CONNECTOR (MALE)		1
D502-04	MA142WA	DIODE	3		P606	VJP3172D003	CONNECTOR (MALE)		1
D505	MA142WK	DIODE	1		P607	VJS3801B010	CONNECTOR (FEMALE)		1
D701	MA143	DIODE	1		P608	VJP3518B002	CONNECTOR (MALE)		1
D702	MA3056-L	DIODE	1	FOR VEP82223A	P609	VJP3172D002	CONNECTOR (MALE)		1
D702	MA3062-M	DIODE	1	FOR VEP82212A/B	P610	VJP3518B003	CONNECTOR (MALE)		1
D703	MA738	DIODE	1		P611	VJP3518B002	CONNECTOR (MALE)		1
D704	MA3056-L	DIODE	1	FOR VEP82212A/B	P612	VJP3172D004	CONNECTOR (MALE)		1
D705	MA3051-M	DIODE	1	FOR VEP82223A					

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
P613	VJS3406B015	CONNECTOR (FEMALE)	1		QR915	UN5214	TRANSISTOR-RESISTOR	1	
P614, 15	VJS3422B017	CONNECTOR (FEMALE)	2		QR917	UN5214	TRANSISTOR-RESISTOR	1	
P616	VJS3422B019	CONNECTOR (FEMALE)	1		QR919-23	UN5214	TRANSISTOR-RESISTOR	5	
P617	VJP1232T	CONNECTOR (MALE) 5P	1		QR925	UN5214	TRANSISTOR-RESISTOR	1	
P618	VJP3125B002	CONNECTOR (MALE)	1		R1	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	FOR VEP80B09A
P619	VJP3809E060	CONNECTOR (MALE)	1		R2	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	FOR VEP80B09A
P620	VJP3358C022	CONNECTOR (MALE)	1		R3	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	FOR VEP80B09A
Q1, Q2	2SD1820-R	TRANSISTOR	2	FOR VEP80B09A	R4	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	FOR VEP80B09A
Q100, Q1	2SD1820R	TRANSISTOR	2		R5, R6	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	FOR VEP80B09A
Q103, Q4	2SD1820R	TRANSISTOR	2		R7	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	FOR VEP80B09A
Q105	2SB1219A-R	TRANSISTOR	1		R8, R9	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	FOR VEP80B09A
Q106	2SD1819A-R	TRANSISTOR	1		R10	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	FOR VEP80B09A
Q200, Q1	2SB1073-R	TRANSISTOR	2		R102, Q3	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
Q203-Q6	2SD1820R	TRANSISTOR	4	FOR VEP82223A	R104	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
Q301, Q2	2SB1073-R	TRANSISTOR	2		R112	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q401	2SB1219A-R	TRANSISTOR	1		R118	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q502, Q3	2SD1819A-R	TRANSISTOR	2		R120-26	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	7	
Q702	2SB1073-R	TRANSISTOR	1		R128	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
Q703	2SD1624-S	TRANSISTOR	1		R130	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
Q811	2SB936A-Q	TRANSISTOR	1		R131	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
Q812	2SD1819A-R	TRANSISTOR	1		R132	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
Q815	2SD1819A-R	TRANSISTOR	1		R133	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
Q816, 17	2SB1073-R	TRANSISTOR	2		R134	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
Q818	2SB936A-Q	TRANSISTOR	1	FOR VEP82223A	R135	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
Q819	2SD1819A-R	TRANSISTOR	1		R136	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
Q820	2SB1219A-R	TRANSISTOR	1		R137	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
Q821, 22	2SD1624-S	TRANSISTOR	2		R138	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q823	2SB1219A-R	TRANSISTOR	1		R139	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q825	2SD1819A-R	TRANSISTOR	1		R140	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
Q826, 27	2SB1073-R	TRANSISTOR	2		R141	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
Q829	2SD1819A-R	TRANSISTOR	1		R142	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
Q830	2SB1219A-R	TRANSISTOR	1		R143	ERJ8GEYJ271	M.RESISTOR CH 1/8W 270	1	
Q831, 32	2SD1624-S	TRANSISTOR	2		R144	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
Q833	2SB1219A-R	TRANSISTOR	1		R145	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
Q835	2SD1819A-R	TRANSISTOR	1		R146	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
Q836, 37	2SB1073-R	TRANSISTOR	2		R148	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
Q839	2SD1819A-R	TRANSISTOR	1		R149	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
Q840	2SB1219A-R	TRANSISTOR	1		R150	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
Q841, 42	2SD1624-S	TRANSISTOR	2		R151	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
Q843	2SB1219A-R	TRANSISTOR	1		R152	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q848	2SD1819A-R	TRANSISTOR	1	FOR VEP82223A	R153	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
Q903	2SD1819A-R	TRANSISTOR	1		R154	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q905-Q8	2SD1819A-R	TRANSISTOR	4		R155	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
Q914	2SD1819A-R	TRANSISTOR	1		R156, 57	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2	
Q918	2SD1819A-R	TRANSISTOR	1		R158	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q922	2SD1819A-R	TRANSISTOR	1		R160-66	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	7	
Q924	2SD1819A-R	TRANSISTOR	1		R167	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
Q926	2SD1819A-R	TRANSISTOR	1		R172	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q930	2SD1819A-R	TRANSISTOR	1		R178	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
QR1	UN5213	TRANSISTOR-RESISTOR	1	FOR VEP80B09A	R179, 80	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	2	
QR101, Q2	UN5213	TRANSISTOR-RESISTOR	2		R181	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
QR106	UN5213	TRANSISTOR-RESISTOR	1		R182	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
QR150	UN5213	TRANSISTOR-RESISTOR	1		R183	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
QR200, Q1	UN5213	TRANSISTOR-RESISTOR	2	FOR VEP82223A	R185	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
QR305	UN5113	TRANSISTOR-RESISTOR	1		R190	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
QR306	UN5213	TRANSISTOR-RESISTOR	1		R191	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
QR504	UN5213	TRANSISTOR-RESISTOR	1		R192-95	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	4	
QR701, Q2	UN5114	TRANSISTOR-RESISTOR	2		R196	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
QR703-Q5	UN5214	TRANSISTOR-RESISTOR	3	FOR VEP82223A	R201	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
QR801	UN5213	TRANSISTOR-RESISTOR	1		R202	ERJ8GEYJ681	M.RESISTOR CH 1/8W 680	1	FOR VEP82212A/B
QR804	UN5214	TRANSISTOR-RESISTOR	1		R203, Q4	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
QR809, Q10	UN5214	TRANSISTOR-RESISTOR	2		R205	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
QR813	UN5214	TRANSISTOR-RESISTOR	1		R206	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
QR814	UN5114	TRANSISTOR-RESISTOR	1		R208	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
QR818	UN5114	TRANSISTOR-RESISTOR	1		R209	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
QR824	UN5114	TRANSISTOR-RESISTOR	1		R210	ERJ8GEYJ1R0	M.RESISTOR CH 1/8W 1.0	1	FOR VEP82212A/B
QR828	UN5114	TRANSISTOR-RESISTOR	1		R210	ERJ8GEYJ1R5	M.RESISTOR CH 1/8W 1.5K	1	FOR VEP82223A
QR834	UN5114	TRANSISTOR-RESISTOR	1		R211	ERJ8GEYJ1R2	M.RESISTOR CH 1/8W 1.2K	1	
QR838	UN5114	TRANSISTOR-RESISTOR	1		R212	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
QR844-46	UN5214	TRANSISTOR-RESISTOR	3		R213, 14	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
QR849-52	UN5212	TRANSISTOR-RESISTOR	4	FOR VEP82223A	R215	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
QR903-Q7	UN5214	TRANSISTOR-RESISTOR	5		R216	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
QR913	UN5214	TRANSISTOR-RESISTOR	1		R217	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
					R219, 20	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	



## AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R221	ERJ6PBD333	M. RESISTOR CH 1/10W 33K	1		R334, 35	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R222	ERJ6PBD223	M. RESISTOR CH 1/10W 22K	1		R337, 38	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	2	
R224	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1		R339	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R225	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R340, 41	ERJ8GEYJ681	M. RESISTOR CH 1/8W 680	2	
R226	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	1		R342	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R227	ERJ8GEYJ1R2	M. RESISTOR CH 1/8W 1.2K	1		R344	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R228	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R346-49	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	4	
R229, 30	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2		R356, 57	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2	
R231	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R358	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R232	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1		R361	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R237	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1		R362	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R238	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R363	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R239	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R364	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R240	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R371, 72	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	2	
R241	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R401	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R242	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1		R402	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R243	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R406	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R244	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1		R407	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R245	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R408	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R246	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R411	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R247	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R412	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R248	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R416	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R249	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1		R417	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R250	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R418	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R251, 52	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	2		R421	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R253	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1		R422	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R254	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1		R426	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R256	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1		R427	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R260, 61	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2		R428	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R262	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1		R431	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R263	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R432	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R264	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1		R436	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R265	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1		R437	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R266	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R438	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R267	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1		R441, 42	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R268-70	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3		R443	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R271	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1		R444	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R272	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R445	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R273	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1		R448	ERJ6PBD222	M. RESISTOR CH 1/10W 2.2K	1	
R274	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1		R449	ERJ6PBD682	M. RESISTOR CH 1/10W 6.8K	1	
R275	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R451	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R280	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	FOR VEP82223A	R461	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R281	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	FOR VEP82223A	R468, 69	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R282	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP82223A	R470	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R283	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	FOR VEP82223A	R471	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R284, 85	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	FOR VEP82223A	R472, 73	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R286	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	FOR VEP82223A	R503-06	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R287, 88	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	FOR VEP82223A	R508	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R289	ERJ8GEYJ681	M. RESISTOR CH 1/8W 680	1	FOR VEP82223A	R509	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R290	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP82223A	R510	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R291	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	FOR VEP82223A	R512	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R292, 93	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	FOR VEP82223A	R513	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R294	ERJ8GEYJ681	M. RESISTOR CH 1/8W 680	1	FOR VEP82223A	R514	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R295	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	FOR VEP82223A	R517, 18	ERJ6PBD223	M. RESISTOR CH 1/10W 22K	2	
R296	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	FOR VEP82223A	R519, 20	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R297	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP82223A	R524	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R298	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	FOR VEP82223A	R526	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R299	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP82223A	R527	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R301, 02	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2		R528	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R303	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1		R533	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R304	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1		R534	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R305	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1		R535	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R306	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1		R536	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R308-10	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3		R537-40	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R312	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R541	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R313, 14	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2		R542	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R315	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R543	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R316	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1		R544	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R317	ERJ6GEYJ154	M. RESISTOR CH 1/10W 150K	1		R545-51	ERJ3GEYJ0R00	M. RESISTOR CH 1/16W 0	7	
R318	ERJ6PBD183	M. RESISTOR CH 1/10W 18K	1		R552, 53	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2	
R319	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1		R556, 57	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R320	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R558	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R327, 28	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2		R559	ERJ3GEYJ511	M. RESISTOR CH 1/16W 510	1	
R330	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	1		R560, 61	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	2	
R332	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	1		R600	ERJ12Y0R00	M. RESISTOR CH 1/2W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R701,02	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R703	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R704	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R706	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R707	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R708	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R709	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R710	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R711	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R712,13	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R714	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R715	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R716,17	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	2	
R718	ERJ8GEYJ300	M.RESISTOR CH 1/8W 30	1	
R721	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R722	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R727-30	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	4	
R731-34	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4	
R735	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R736	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R737,38	ERJ8GEYJ102	M.RESISTOR CH 1/8W 1K	2	
R747	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R748	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R749,50	ERJ8GEYJ0R00	M.RESISTOR CH 1/8W 0	2	FOR VEP82223A
R801	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R803,04	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R805	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R806-11	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	6	
R812,13	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	2	FOR VEP82223A
R814	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	FOR VEP82223A
R815-17	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R819,20	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R821	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R822	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R823-25	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	3	
R826,27	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	2	
R828	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R829	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R830	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R831,32	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R833	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R834,35	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R836	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R837	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R838	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R839	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R840,41	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R842	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R843,44	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R845	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R846	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R847,48	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	2	
R849	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R850	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R851,52	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R853	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R854,55	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R856	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R857	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R858	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R859	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R860,61	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R862	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R863,64	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R865	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R866	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R867,68	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	2	
R869	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R870	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R871,72	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R873	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R874,75	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	2	
R876	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R877	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R878	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R879	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R880	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R881	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R882-84	ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	3	
R885	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R886	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R887	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R890-95	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	6	
R897,98	ERJ12YJ3R3	M.RESISTOR CH 1/2W 3.3	2	
R905	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R906	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R907	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R908	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R910	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R913	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R914	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R915	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R917,18	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R921	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R922	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R923	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R924	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R925	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R926	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R927-30	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R932	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP82223A
R933,34	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R936-38	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R940	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R941,42	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	FOR VEP82223A
R943	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	FOR VEP82223A
R944	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP82223A
R945-47	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	3	FOR VEP82223A
SW901	VSS0367-02B	SWITCH	1	FOR VEP82223A
TG114	EYF6CU	TEST POINT	1	
TG300	EYF6CU	TEST POINT	1	
TP100-02	EYF6CU	TEST POINT	3	
TP107	EYF6CU	TEST POINT	1	
TP113	EYF6CU	TEST POINT	1	
TP115,16	EYF6CU	TEST POINT	2	
TP301,02	EYF6CU	TEST POINT	2	
TP402	EYF6CU	TEST POINT	1	
TP501-05	EYF6CU	TEST POINT	5	
TP902	EYF6CU	TEST POINT	1	
VR101	EVM7JGA00B54	V.RESISTOR 50K	1	
VR401	EVM7JGA00B54	V.RESISTOR 50K	1	
VR402	EVM7JGA00B24	V.RESISTOR 20K	1	
VR501,02	EVM7JGA00B24	V.RESISTOR 20K	2	
VR503	EVM7JSX30B24	V.RESISTOR 20K	1	FOR VEP82212A/B
VR503	VRV0303B203A	V.RESISTOR 20K	1	FOR VEP82223A
VR504	EVM7JSX30B24	V.RESISTOR 20K	1	FOR VEP82212A/B
VR504	VRV0303B203A	V.RESISTOR 20K	1	FOR VEP82223A
X500	VSX0791	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4607	SHIELD CASE	1	
■ E2	VEP00W08B	HEAD PHONE P.C.BOARD	1	(RTL)
C9201,02	ECKF1H102ZF	C.CAPACITOR 50V 1000P	2	
J9201	VJJ0522	JACK	1	
L1,L2	VLP0147	COIL	2	



## AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P9201	VJP1608T	CONNECTOR (MALE)	1	
■ E3	VEP80A44A	DC INPUT P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E3	VEP00X87C	DC INPUT P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
D1	S3V40	D10DE	1	
		MISCELLANEOUS		
	VJP2717	CONNECTOR	1	
	VLP0312	FERRITE CORE	1	FOR VEP00X87C
	VEE9423	EXT DC CABLE	1	
	VLP0312	FERRITE CORE	1	
■ E4	VEP84297B	REAR JACK P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E4	VEP84297C	REAR JACK P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE
C1001-06	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	6	
C1007	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C1008	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C1009	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	1	
C1010	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	1	
C1011	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C1012	ECQ82332JF	P.CAPACITOR 200V 3300P	1	
C1014	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C1015	ECEV0JN100Q	E.CAPACITOR CH6.3V 10U	1	
C1016	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C1017	VCC0030	C.CAPACITOR	1	
C1018	ECUM1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C1019	ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1020	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C1021	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C1022	ECEV0JN100Q	E.CAPACITOR CH6.3V 10U	1	
C1023	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C1024	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C1025	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C1026	VCE0180	E.CAPACITOR	1	
C1027	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C1028, 29	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C1030, 31	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C1032	ECEV0GV221Q	E.CAPACITOR CH 4V 220U	1	
C1033	ECA1EF0102	E.CAPACITOR 25V 1000U	1	FOR VEP84297C
CB1001	VSQ0834	CIRCUIT PROTECTOR	1	
D1001	S3V60	D10DE	1	
D1002	MA142K	D10DE	1	
FL1001	E1R7QF012B	TRANSFORMER	1	
IC1001, 02	NJM4558M-D	IC	2	
L1002, 03	VLF1315A102	COIL 1000UH	2	
L1005	VLF1315A102	COIL 1000UH	1	
L1007, 08	VLF1315A102	COIL 1000UH	2	
L1010	VLF1315A102	COIL 1000UH	1	
L1011, 12	VLF1151A132	COIL 1300UH	2	
L1013	VLP0320	COIL	1	
L1014	VL00423J472	COIL 4700UH	1	
L1015-22	VLF1315A102	COIL 1000UH	8	
L1023	ELELN560KA	COIL 56UH	1	
P1001	VJS2907D025	CONNECTOR (FEMALE)	1	
P1002	VJP2824B002	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P1003	VJP2824A003	CONNECTOR (MALE) 3P	1	
P1004	VJP3518B008	CONNECTOR (MALE)	1	
P1005	VJP3125B009	CONNECTOR (MALE)	1	
P1006, 07	VJP3125B004	CONNECTOR (MALE)	2	
P1008, 09	VJS3551	CONNECTOR (FEMALE)	2	
Q1001	2SJ280S	TRANSISTOR	1	
Q1002	2SB779-Q	TRANSISTOR	1	
Q1003	2SD1819A-R	TRANSISTOR	1	
Q1004	2SD874-R	TRANSISTOR	1	
Q1005	2SD1979	TRANSISTOR	1	
Q1006	2SB1220-R	TRANSISTOR	1	
Q1007, 08	2SD1821-R	TRANSISTOR	2	
Q1009, 10	2SD1979	TRANSISTOR	2	
QR1001-06	UN5113	TRANSISTOR-RESISTOR	6	
R1001	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R1002	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R1003	ERJ6GEYJ1R0	M.RESISTOR CH 1/10W 1	1	
R1004	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R1005	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1006	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1007	ERJ8GEYJ1R0	M.RESISTOR CH 1/8W 1	1	
R1008	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R1009	ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R1010	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R1011	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1012	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1014	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R1015	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R1016	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R1017	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R1018	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1019	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R1020	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1021	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1022, 23	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R1024	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R1025, 26	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R1027	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R1028	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1029	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1030	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R1031	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1034	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R1035	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R1036	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R1037	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R1038	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
SW1001	VSS0342	SWITCH	1	
T1001	VLT0729	TRANSFORMER	1	
TG1001, 02	EYF6CU	TEST POINT	2	
VR1001	VRV0161B503	V.RESISTOR 50K	1	
VR1002	VRV0161B103	V.RESISTOR 10K	1	
		MISCELLANEOUS		
	VMP4846	JACK ANGLE	1	
	XYN3+K6	SCREW	1	
	VEE0C58	GND CABLE	1	FOR VEP84297C
■ E5	VEP80A43A	AV OUT P.C.BOARD	1	(RTL)FOR AJ-D215P/D200P
■ E5	VEP80A75A	AV OUT P.C.BOARD	1	(RTL)FOR AJ-D215HE/D200HE

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6,C7	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	FOR VEP80A75A
J3	VJS3154	CONNECTOR (FEMALE)	1	
J4	VJS3155	CONNECTOR (FEMALE)	1	
J5	VJJ0323	RCA PIN JACK	1	
L1	VLP0147	COIL	1	FOR VEP80A75A
L4,L5	VLP0147	COIL	2	FOR VEP80A75A
L6,L7	VLP0352	FERRITE CORE	2	FOR VEP80A75A
P9700	VJP1610T	CONNECTOR (MALE)	1	
P9701	VJP1607T	CONNECTOR (MALE)	1	
R2,R3	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	FOR VEP80A75A
■ E6	VEP00Y56A	SERVO FLEX P.C.BOARD	1	(RTL)
P1,P2	VJS3806E060	CONNECTOR (FEMALE)	2	
■ E7	VEP81179A	POWER P.C.BOARD	1	(RTL)
C1001	VCE0180	E.CAPACITOR	1	
C1002	ECEV1EV4R70	E.CAPACITOR CH 25V 4.7U	1	
C1003	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	
C1004	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C1005	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C1006	ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C1007	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1008	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C1009	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1010	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C1011-13	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	3	
C1014	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1015	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1016	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	
C1017,18	VCEA1DAP101	E.CAPACITOR 20V 100U	2	
C1021	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1022	VCE0180	E.CAPACITOR	1	
C1023	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C1024	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1025	VCE0180	E.CAPACITOR	1	
C1026	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C1027	VCE0180	E.CAPACITOR	1	
C1028	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	
C1029	VCE0180	E.CAPACITOR	1	
C1030	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	
C1031	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1033	VCE0180	E.CAPACITOR	1	
C1034	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1035	VCE0180	E.CAPACITOR	1	
C1036,37	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	2	
C1038	ECEV1EV4R70	E.CAPACITOR CH 25V 4.7U	1	
C1039	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C1042	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1043	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1044	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1045	ECUX1C273KBV	C.CAPACITOR CH 16V 0.027U	1	
C1046-48	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	3	
C1049	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C1050	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1051	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1053	VCE0180	E.CAPACITOR	1	
C1054	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C1055	VCE0180	E.CAPACITOR	1	
C1056	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	

AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D1011	EC100S1012	D10DE	1		R1013	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
D1014	MA736	D10DE	1		R1014	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
D1015	MA738	D10DE	1		R1015	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
D1017, 18	MA142WK	D10DE	2		R1016	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
D1101	MA142K	D10DE	1		R1018	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
D1102	SB05-05CP	D10DE	1		R1019	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
D1103	MA142K	D10DE	1		R1021	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
D1106-12	MA8068-H	D10DE	7		R1022	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
IC1001,02	BA9706K	IC	2		R1023	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC1003	LM2577MX-ADJ	IC	1		R1024	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
IC1004	BA9707KV	IC	1		R1025	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
L1001	VL00407120M	COIL 120H	1		R1026	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
L1002, 03	VL00622	COIL	2		R1027	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
L1004	VL00297	COIL	1		R1030	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
L1005	VL00407680K	COIL 68UH	1		R1031	ERJ6RBD133	M.RESISTOR CH 1/10W 13K	1	
L1007	VL00621	COIL	1		R1032	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
L1009	VL00621	COIL	1		R1033	ERJ6RBD393	M.RESISTOR CH 1/10W 39K	1	
L1010	VL00407680K	COIL 68UH	1		R1034	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
L1012	VL00621	COIL	1		R1035, 36	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	2	
L1013	VL00407680K	COIL 68UH	1		R1038	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
L1014	VL00642	COIL	1		R1039	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
L1015	VL00417	COIL 10UH	1		R1040	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
L1016	VL00319K680	COIL	1		R1041	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
L1017	VL00621	COIL	1		R1042	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
L1018	VL00407680K	COIL 68UH	1		R1043, 44	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
L1101	ELC5SB39M	COIL 3.9UH	1		R1045, 46	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
L1102	ELL7SR330M	COIL 33UH	1		R1047	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
L1103	ELC5SB4R7M	COIL 4.7UH	1		R1048	ERJ3GEYJ632	M.RESISTOR CH 1/16W 3.3K	1	
L1104	ELL7SR470M	COIL 47UH	1		R1049, 50	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
L1105	ELC5SB4R7M	COIL 4.7UH	1		R1051	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
L1106	ELL7SR220M	COIL	1		R1054	ERJ6RBD563	M.RESISTOR CH 1/10W 56K	1	
L1107	VL00319K100	COIL 10UH	1		R1055	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
L1108	VL00319K220	COIL 22UH	1		R1056	ERJ3GEYJ632	M.RESISTOR CH 1/16W 3.3K	1	
L1109	VL00319K100	COIL 10UH	1		R1057	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
L1110	VL00319K220	COIL 22UH	1		R1058	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
P1001	VJS2889A025	CONNECTOR (FEMALE)	1		R1060	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
P1002	VJS2698A026	CONNECTOR (FEMALE)	1		R1062	ERJ6RBD163	M.RESISTOR CH 1/10W 16K	1	
P1003	VJP1231T	CONNECTOR (MALE) 4P	1		R1063	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
Q1001, 02	2SJ245S	TRANSISTOR	2		R1064	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
Q1003, 04	2SD1820A-R	TRANSISTOR	2		R1065	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
Q1005	2SB1219A	TRANSISTOR	1		R1066	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
Q1006	2SJ245S	TRANSISTOR	1		R1069	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
Q1007	2SD1820A-R	TRANSISTOR	1		R1070	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
Q1008	2SB1219A	TRANSISTOR	1		R1071	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
Q1009	2SJ245S	TRANSISTOR	1		R1072	ERJ14YJ1R0	M.RESISTOR CH 1/4W 1.0	1	
Q1010	2SD1820A-R	TRANSISTOR	1		R1073	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
Q1011	2SB1219A	TRANSISTOR	1		R1074	ERJ6RBD683	M.RESISTOR CH 1/10W 68K	1	
Q1012	2SJ245S	TRANSISTOR	1		R1075	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
Q1013	2SD1820A-R	TRANSISTOR	1		R1076	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
Q1014	2SB1219A	TRANSISTOR	1		R1077	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
Q1015	2SJ279S	TRANSISTOR	1		R1078	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q1016	2SB1219A	TRANSISTOR	1		R1080	ERJ3GEYJ632	M.RESISTOR CH 1/16W 3.3K	1	
Q1017	2SD1820A-R	TRANSISTOR	1		R1081	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
Q1019	2SD1820A-R	TRANSISTOR	1		R1082	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
Q1020	2SB1219A	TRANSISTOR	1		R1083	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
Q1022	2SD1820A-R	TRANSISTOR	1		R1085	ERJ3GEYJ632	M.RESISTOR CH 1/16W 3.3K	1	
Q1101-03	FP102	TRANSISTOR	3		R1086	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
Q1104	2SB798	TRANSISTOR	1		R1087	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
Q1105, 06	2SJ245S	TRANSISTOR	2		R1088	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1001	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1		R1089	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1002	ERJ6RBD393	M.RESISTOR CH 1/10W 39K	1		R1092	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R1003	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R1093	ERJ6RBD393	M.RESISTOR CH 1/10W 39K	1	
R1004	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1		R1096, 97	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	2	
R1005, 06	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	2		R1101	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R1007	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	1		R1102	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1008	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R1103	ERJ3RBD151	M.RESISTOR CH 1/16W 150	1	
R1009	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R1104	ERJ3RBD242	M.RESISTOR CH 1/16W 2.4K	1	
R1010	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R1105	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1011	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1		R1106	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R1012	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R1107, 08	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
					R1109	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
					R1110	ERJ6RBD513	M.RESISTOR CH 1/10W 51K	1	
					R1111	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
					R1112, 13	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	2	
					R1114	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1115	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		C41	ECST1AX106Z	T.CAPACITOR CH 10V 10U	1	
R1116, 17	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		C42, 43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
R1118, 19	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2		C44	VCK0151	C.CAPACITOR	1	
R1120	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1		C45, 46	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
R1121	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		C47	ECST1AX106Z	T.CAPACITOR CH 10V 10U	1	
R1122	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1		C48	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
R1123	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		C49	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
R1124	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		C50	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
R1125	ERJ6RBD361	M.RESISTOR CH 1/10W 360	1		C51-53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
R1126	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1		C54	ECEVOGV470Q	E.CAPACITOR CH 4V 47U	1	
R1127	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		C55, 56	VCK0152	C.CAPACITOR	2	FOR VEP83356D/A
R1128	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		C57	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	FOR VEP83356D/A
R1129	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		C58	ECEVOJV470Q	E.CAPACITOR CH6.3V 47P	1	FOR VEP83356D/A
R1130	ERJ6RBD242	M.RESISTOR CH 1/10W 2.4K	1		C59	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	FOR VEP83356D/A
R1131	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1		C60-62	VCK0151	C.CAPACITOR	3	
R1132	ERJ3RBD301	M.RESISTOR CH 1/16W 300	1		C63-65	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	FOR VEP83356D/A
R1133	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		C66	VCK0151	C.CAPACITOR	1	
R1134	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1		C75, 76	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
R1135	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		C77	ECEVOJV470Q	E.CAPACITOR CH6.3V 47U	1	
R1136	ERJ6RBD433	M.RESISTOR CH 1/10W 43K	1		C80-82	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	FOR VEP83356D/A
R1137	ERJ6RBD753	M.RESISTOR CH 1/10W 75K	1		C86	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
R1138	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		C87	ECEVOGV470Q	E.CAPACITOR CH 4V 47U	1	
R1143-45	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	3		C88	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	1	FOR VEP83356D/A
R1146	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		C90, 91	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
R1201	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		C92	ECEVOJV470Q	E.CAPACITOR CH6.3V 47U	1	
R1202	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		C93-95	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
R1203	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		C96	ECEVOGV470Q	E.CAPACITOR CH 4V 47U	1	
R1205	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		C103	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
R1206	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		C120	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
R1207	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		C121	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
R1208	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		C122	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
R1210	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		C123	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
R1211, 12	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2		C124	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	FOR VEP83356D/A
R1213	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		C125	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	FOR VEP83356D/A
T1001	ELL7SRD006	COIL	1		C129, 30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	FOR VEP83356D/A
TP1001-09	EYF6CU	TEST POINT	9		C131	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	FOR VEP83356D/A
TP1101-06	EYF6CU	TEST POINT	6		C141	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
VR1001-05	EVM7JGA00B23	V.RESISTOR 2K	5		C142	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83356D/A
VR1006	EVM7JGA00B52	V.RESISTOR 500	1		C143	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	FOR VEP83356D/A
W1-W4	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	4		C144	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	FOR VEP83356D/A
					C145	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	FOR VEP83356D/A
					C146	VCK0152	C.CAPACITOR	1	
					C147	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
					C148	ECEVOGV470Q	E.CAPACITOR CH 4V 47U	1	
					C153	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	FOR VEP83356D/A
					C154	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83356D/A
					C155	ECEVOJN100Q	E.CAPACITOR CH6.3V 10P	1	FOR VEP83356D/A
					C160	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	FOR VEP83356E/B
					C160	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	FOR VEP83356D/A
					C161	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
					C162, 63	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
					C164	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	
					C165	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
					C166	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
					C168-70	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
					C171	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
					C172	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	1	
					C173	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
					C174	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
					C175	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
					C181	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	FOR VEP83356D/A
					C183, 84	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	FOR VEP83356D/A
					C186	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83356D/A
					C187	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	FOR VEP83356D/A
					C189	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83356D/A
					C190	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1	FOR VEP83356D/A
					C191	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
					C192	ECEVEN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
					C193-96	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	FOR VEP83356D/A
					C197	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	FOR VEP83356D/A
					C501	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
					C504	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
					C505	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
					C506	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
					C1001	ECEV1EV2200	E.CAPACITOR CH 25V 22U	1	
C1	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1						
C2	VCK0151	C.CAPACITOR	1						
C3, C4	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2						
C5	ECEVOGV470Q	E.CAPACITOR CH 4V 47U	1						
C8	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1						
C9	VCK0152	C.CAPACITOR	1						
C11	VCK0152	C.CAPACITOR	1						
C13	VCK0152	C.CAPACITOR	1						
C16, 17	VCK0152	C.CAPACITOR	2						
C19	VCK0152	C.CAPACITOR	1						
C21	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1						
C22, 23	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	2						
C24	VCK0152	C.CAPACITOR	1						
C25	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1						
C26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1						
C32, 33	VCK0151	C.CAPACITOR	2						
C34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1						
C35	VCK0151	C.CAPACITOR	1						
C38	ECUX1H102JV	C.CAPACITOR CH 50V 1000P	1						
C39, 40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2						



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3001, 02	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C3523-26	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	4	
C3003	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C3527-29	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	3	
C3004, 05	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C3530	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3006	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C3531	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C3007	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C3532-34	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	3	
C3008	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1		C3535	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C3009, 10	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C3536-51	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	16	
C3011	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C3552	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3012	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4001, 02	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C3013	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C4003	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3014	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4004, 05	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	2	
C3018	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4006, 07	ECUX1H103JB	P. CAPACITOR 50V 0.01U	2	
C3019	ECEVOGV470Q	E. CAPACITOR CH 4V 47U	1		C4008	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3020, 21	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4011-14	ECEVOJV470Q	E. CAPACITOR CH6. 3V 47U	4	
C3022	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C4015	ECUM1H104KBM	C. CAPACITOR CH 50V 0.1U	1	
C3023, 24	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4016-18	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	3	
C3025	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C4019	ECEVOGV470Q	E. CAPACITOR CH 4V 47U	1	
C3026-30	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	5		C4020	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3100	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4021	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3102	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1		C4022	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3104	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1		C4023	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3105, 06	ECUX1H040CCV	C. CAPACITOR CH 50V 4P	2		C4024, 25	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2	
C3107	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4026	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3109	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1		C4027	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3111	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1		C4028	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3112, 13	ECUX1H040CCV	C. CAPACITOR CH 50V 4P	2		C4029, 30	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C3114, 15	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4031	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3200	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	1		C4032	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3208	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4033	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3210	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		C4034	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3211	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4035	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3212	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1		C4036	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3213	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		C4037	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3214, 15	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4038	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3217, 18	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4039	ECEVOJV470Q	E. CAPACITOR CH6. 3V 47U	1	
C3219	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1		C4040	ECST1VY684Z	T. CAPACITOR CH 35V 0.68U	1	
C3220, 21	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4041	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3223, 24	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4042	ECEV1HN010Q	E. CAPACITOR CH 50V 1U	1	
C3225	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	1		C4043	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3231	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		C4044	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3232	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4045	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3233	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1		C4046	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3234	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		C4047	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3235, 36	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4048	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C3238	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4049	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3240, 41	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2		C4050	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3243-46	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	4		C4051	ECUX1H182KBV	C. CAPACITOR CH 50V 1800P	1	
C3257-60	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	4		C4052-57	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	6	
C3261, 62	ECEV1EV470Q	E. CAPACITOR CH 25V 4.7U	2		C4058	ECUX1H182KBV	C. CAPACITOR CH 50V 1800P	1	
C3263	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4059	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3264	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1		C4062	VCE0200	E. CAPACITOR	1	
C3265	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4063	ECEV1HV100Q	E. CAPACITOR CH 50V 10U	1	
C3266	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1		C4064	ECEA0JU331	E. CAPACITOR 6. 3V 330U	1	FOR VEP83356E/B
C3267, 68	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2		C4101, 02	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	2	
C3269	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4103, 04	ECUX1H104JB	P. CAPACITOR 50V 0.1U	2	
C3270	ECEV1HNR22Q	E. CAPACITOR CH 50V 0.22U	1		C4106	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3271, 72	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	2		C4107	ECST1AC476Z	T. CAPACITOR CH 10V 47U	1	
C3300-07	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	8		C4108	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3309	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4110	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C3311	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1		C4111, 12	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	2	
C3312	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4113, 14	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	2	
C3313	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1		C4115, 16	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	2	
C3314-17	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	4		C4117	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3319	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1		C4118	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C3320	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4119	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3321	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1		C4120	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3322	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1		C4121	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3323	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1		C4122	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3324	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1		C4123	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3500	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1		C4124	ECEVOJV470Q	E. CAPACITOR CH6. 3V 47U	1	
C3501-08	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	8		C4125, 26	ECUX1H104JB	P. CAPACITOR 50V 0.1U	2	
C3509, 10	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	2		C4129	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3511-14	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	4		C4130	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C3515	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1		C4131	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	1	
C3516-22	ECUX1E104ZFY	C. CAPACITOR CH 25V 0.1U	7		C4132	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4133	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC6	XC62AP2302P	IC	1	
C4135	ECEVOJN1000	E. CAPACITOR CH6.3V 10U	1		IC7,C8	TC7SH08FU	IC	2	
C4136	ECEVOJV2200	E. CAPACITOR CH6.3V 22U	1		IC9	TVHC125FT	IC	1	
C4137	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC10	TC7S66FU	IC	1	
C4201, 02	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	2		IC11	M65401FP	IC	1	
C4203, 04	ECUH1H104JB	P. CAPACITOR 50V 0.1U	2		IC12	TC7W04FU	IC	1	
C4208	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	1		IC13	M52660FP	IC	1	
C4209	ECST1AC476Z	T. CAPACITOR CH 10V 47U	1		IC15	MN657021F	IC	1	FOR VEP83356D/A
C4210	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC16	MB81V4260S7	IC	1	
C4211	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1		IC19	XC62AP3002P	IC	1	
C4213, 14	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	2		IC20	XC62AP5002P	IC	1	
C4215, 16	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	2		IC22	M62370GP	IC	1	
C4217, 18	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC23	XC62AP5002M	IC	1	
C4219	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		IC24	XC62AP3002M	IC	1	
C4220	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1		IC25, 26	TC7SH08FU	IC	2	FOR VEP83356D/A
C4221	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC30	XC62DN5002P	IC	1	
C4222	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1		IC31	TC7SH08FU	IC	1	FOR VEP83356D/A
C4223	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC32	AD826AR	IC	1	FOR VEP83356D/A
C4224	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		IC33	T160G11-1233	IC	1	
C4225	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		IC36	TVHC08FT	IC	1	
C4226	ECEVOJV4700	E. CAPACITOR CH6.3V 47U	1		IC37	TC7SH08FU	IC	1	
C4227, 28	ECUH1H104JB	P. CAPACITOR 50V 0.1U	2		IC40	AD817AR	IC	1	
C4229	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC41	AD790JR	IC	1	
C4230	ECEVICV2200	E. CAPACITOR CH 16V 22U	1		IC42	TC7SH08FU	IC	1	
C4231	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC43	NJM2535M	IC	1	
C4232	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1		IC45	TVHC161FT	IC	1	
C4233	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC46	TC7W04FU	IC	1	
C4235	ECEVOJN1000	E. CAPACITOR CH6.3V 10U	1		IC48	AD817AR	IC	1	FOR VEP83356D/A
C4236	ECEVOJV2200	E. CAPACITOR CH6.3V 22U	1		IC51	NJM2904M	IC	1	
C4237	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC501	M37709M4L165	IC	1	
C6001-05	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	5		IC3001	TVHC125FT	IC	1	
C6006, 07	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3002	TC7S04FU	IC	1	
C6008	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3003	XC62AP5002P	IC	1	
C6009	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3005	XC62AP3002P	IC	1	
C6010	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1		IC3006	XC62AP5002M	IC	1	
C6011, 12	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC3007	XC62DN5002P	IC	1	
C6013	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3008	TVHC125FT	IC	1	
C6014-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5		IC3009	TC7S00FU	IC	1	
C6019	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		IC3010	TC7W02FU	IC	1	
C6020	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3011	TC7S04FU	IC	1	
C6022	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1		IC3100	TC7W04FU	IC	1	
C6023	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3101	TC7W00FU	IC	1	
C6025, 26	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3200, 01	TC4S69F	IC	2	
C6030-41	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	12		IC3203	NJM062M-D	IC	1	
C6042-47	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6		IC3204	XC62DN5002P	IC	1	
C6052	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3205, 06	TC4S69F	IC	2	
C6053	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1		IC3208	UPC1663G	IC	1	
C6055	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3209	TC7W32FU	IC	1	
					IC3210, 11	TC7S04FU	IC	2	
D3200-03	MA142HK	DIODE	4		IC3300	UPC5102GS030	IC	1	
D4001, 02	MA143	DIODE	2		IC3302	UPC1663G	IC	1	
D4003	MA3220	DIODE	1		IC3303	TC7W08FU	IC	1	
D4004	MA143	DIODE	1		IC3304	TC7W04FU	IC	1	
D4101, 02	MA143	DIODE	2		IC3500	AN3730FA	IC	1	
D4103	MA715	DIODE	1		IC3501	AN3740FAP	IC	1	
D4104	MA142K	DIODE	1		IC3502	MC14053BF	IC	1	
D4201, 02	MA143	DIODE	2		IC4001	UPC5022GA121	IC	1	
D4203	MA715	DIODE	1		IC4002	HD151015	IC	1	
D4204	MA142K	DIODE	1		IC4003	MC74HC04AF	IC	1	
D6001-08	MA715	DIODE	8		IC4004	XC62AP3002P	IC	1	
					IC4006	AK4503VF	IC	1	
F6D1	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		IC4007	TC7W125FU	IC	1	
					IC4008	BA6138F	IC	1	
FL1	VLF1118	FILTER	1		IC4009	MC14053BF	IC	1	
FL2	VLF1326	FILTER	1	FOR VEP83356D/A	IC4010	NJM062M-D	IC	1	
FL4	VLF1293	FILTER	1	FOR VEP83356D/A	IC4011	CXA1102M	IC	1	
FL3001	VLF0941C223	FILTER	1		IC4012	NJM062M-D	IC	1	
FL4001	VLF1069	FILTER	1		IC4013	BA7785FS	IC	1	
IC1	MN67372A2	IC	1		IC4101	NJM062M-D	IC	1	
IC2	MN4706F	IC	1	FOR VEP83356D/A	IC4102	NJM4580ED	IC	1	
IC2	MN4707F	IC	1	FOR VEP83356E/B	IC4201	NJM062M-D	IC	1	
IC3	MN673711	IC	1		IC6001	M31010M6104H	IC	1	
IC4	L7A1433	IC	1		IC6002	MAX3223CAP	IC	1	
IC5	L7A1434	IC	1		IC6003	S80727AND0	IC	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC6009	TVHC138FT	IC	1		06	2SB1218A-R	TRANSISTOR	1	
IC6010	TVHC04FT	IC	1		08	2SB1218A-R	TRANSISTOR	1	
IC6011	MBLY80B12PFT	IC	1		011	2SD1819A-R	TRANSISTOR	1	FOR VEP83356D/A
IC6012	KM68V1CLTE7L	IC	1		012	2SB1218A-R	TRANSISTOR	1	FOR VEP83356D/A
IC6013	T163G26-1019	IC	1		013	2SD1819A-R	TRANSISTOR	1	FOR VEP83356D/A
IC6014, 15	MC74HC4052F	IC	2		014	XN4401	TRANSISTOR	1	FOR VEP83356D/A
IC6016	UPD6456T611Y	IC	1		015	XN4501	TRANSISTOR	1	FOR VEP83356D/A
IC6018	KM68V1CLTE7L	IC	1		018	XN4401	TRANSISTOR	1	FOR VEP83356D/A
L1	VLP0145	COIL	1		019	XN4501	TRANSISTOR	1	FOR VEP83356D/A
L3-L5	VLP0155	COIL	3		024	XP4312	TRANSISTOR	1	FOR VEP83356D/A
L6, L7	VL00319K101	COIL 100UH	2		Q3001	2SB1114	TRANSISTOR	1	
L8	VL00163J220	COIL 22UH	1		Q3002	2SD1280-S	TRANSISTOR	1	
L11	VLP0155	COIL	1		Q3003	2SB1218A-R	TRANSISTOR	1	
L12, 13	VL00319K101	COIL 100UH	2	FOR VEP83356D/A	Q3100	2SB710A-R	TRANSISTOR	1	
L17	VL00319K101	COIL 100UH	1	FOR VEP83356D/A	Q3101	2SD1819A-R	TRANSISTOR	1	
L23	VL00464K6R8	COIL 6.8UH	1		Q3102, 03	2SC3735B35	TRANSISTOR	2	
L31	VL00464K6R8	COIL 6.8UH	1	FOR VEP83356D/A	Q3104	2SB710A-R	TRANSISTOR	1	
L34	VL00319K101	COIL 100UH	1		Q3105	2SD1819A-R	TRANSISTOR	1	
L40	VL00163K390	COIL 39UH	1	FOR VEP83356D/A	Q3106, 07	2SC3735B35	TRANSISTOR	2	
L41	VL00163K220	COIL 22UH	1	FOR VEP83356D/A	Q3201	2SA1532-C	TRANSISTOR	1	
L42	VLP0145	COIL	1		Q3202-05	2SD1979	TRANSISTOR	4	
L44	VL00464K6R8	COIL 6.8UH	1		Q3207	2SC3935	TRANSISTOR	1	
L501	VL00464K6R8	COIL 6.8UH	1		Q3208, 09	2SC2954	TRANSISTOR	2	
L1001-10	VLF1315A102	FILTER	10		Q3210	2SC3935	TRANSISTOR	1	
L1011, 12	VLP0147	COIL	2		Q3212, 13	2SA1532-C	TRANSISTOR	2	
L1013	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3214	2SC2954	TRANSISTOR	1	
L1013	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3215	2SA1532-C	TRANSISTOR	1	
L1014	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3216-19	2SD1979	TRANSISTOR	4	
L1014	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3221, 22	2SC2954	TRANSISTOR	2	
L1015	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3225, 26	2SA1532-C	TRANSISTOR	2	
L1015	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3227	2SC2954	TRANSISTOR	1	
L1016	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3228	2SD1280-S	TRANSISTOR	1	
L1016	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3229	2SB1218A-R	TRANSISTOR	1	
L1017	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3230	2SB1114	TRANSISTOR	1	
L1017	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3235	2SB1114	TRANSISTOR	1	
L1018	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3300	XN5531	TRANSISTOR-RESISTOR	1	
L1018	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3304, 05	2SC3935	TRANSISTOR	2	
L1019	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3306	2SC3930-B	TRANSISTOR	1	
L1019	VLF1149A182	COIL 1800UH	1	FOR VEP83356E/B	Q3307	XN5531	TRANSISTOR-RESISTOR	1	
L1020	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	Q3500	2SC3930-B	TRANSISTOR	1	
L1020	VLP0147	COIL	1	FOR VEP83356E/B	Q3501	2SB1219A-R	TRANSISTOR	1	
L1200-08	VLF1315A102	COIL 1000UH	9		Q3502	2SB1218A-R	TRANSISTOR	1	
L3001	VL00319K220	COIL 22UH	1		Q4001	2SD1819A-R	TRANSISTOR	1	
L3002, 03	VL00319K101	COIL 100UH	2		Q4002	2SD602A-R	TRANSISTOR	1	
L3100-03	VL00163J2R2	COIL 2.2UH	4		Q4003	2SB710A-R	TRANSISTOR	1	
L3200-03	VL00163J330	COIL 33UH	4		Q4004	2SB1220-R	TRANSISTOR	1	
L3300, 01	VL00163J1R0	COIL 1UH	2		Q4005	2SD602A-R	TRANSISTOR	1	
L3303	VL00163J2R2	COIL 0.22UH	1		Q4006	2SB1219A-R	TRANSISTOR	1	
L4001, 02	VL00163J100	COIL 10UH	2		Q4101, 02	2SD1979	TRANSISTOR	2	
L4101, 02	VL00163J100	COIL 10UH	2		Q4103-05	2SD1819A-R	TRANSISTOR	3	
L4201, 02	VL00163J100	COIL 10UH	2		Q4201, 02	2SD1979	TRANSISTOR	2	
L6001	VL00319K100	COIL 10UH	1		Q4203-05	2SD1819A-R	TRANSISTOR	3	
L6002	VL00464K6R8	COIL 6.8UH	1						
L6003	VL00163J270	COIL 27UH	1						
P1	VJS3791D036	CONNECTOR (FEMALE)	1	FOR VEP83356D/A	QR3001	UN5213	TRANSISTOR-RESISTOR	1	
P2	VJP3810E140	CONNECTOR (MALE)	1		QR3100, 01	UN5213	TRANSISTOR-RESISTOR	2	
P3	VJP3809E060	CONNECTOR (MALE)	1		QR3200, 01	UN5213	TRANSISTOR-RESISTOR	2	
P4	VJS3406B025	CONNECTOR (FEMALE)	1		QR4001	UN5213	TRANSISTOR-RESISTOR	1	
P5	VJP3125D006	CONNECTOR (MALE)	1	FOR VEP83356D/A	QR4002	UN5113	TRANSISTOR-RESISTOR	1	
P6	VJP3125B009	CONNECTOR (MALE)	1		QR4003	UN5213	TRANSISTOR-RESISTOR	1	
P7	VJP3125B008	CONNECTOR (MALE)	1		QR4004	UN5113	TRANSISTOR-RESISTOR	1	
P8	VJS3406D014	CONNECTOR (FEMALE)	1		QR4005	UN5213	TRANSISTOR-RESISTOR	1	
P9, 10	VJP3125B010	CONNECTOR (MALE)	2		QR6001-04	UN5114	TRANSISTOR-RESISTOR	4	
P11	VJS3406B025	CONNECTOR (FEMALE)	1		QR6005	UN5214	TRANSISTOR-RESISTOR	1	
P12	VJP3125B003	CONNECTOR (MALE) 3P	1		QR6006, 07	UN5213	TRANSISTOR-RESISTOR	2	
P13	VJP3950A002	CONNECTOR (MALE)	1		QR6008	UN5214	TRANSISTOR-RESISTOR	1	
P14	VJP3950A006	CONNECTOR (MALE)	1	FOR VEP83356D/E/B	QR6009-11	UN221L	TRANSISTOR-RESISTOR	3	
P3001	VJS3899D013	CONNECTOR (FEMALE)	1		QR6012, 13	UN5211	TRANSISTOR-RESISTOR	2	
P3002	VJP3358C012	CONNECTOR (MALE)	1		QR6014-16	UN5213	TRANSISTOR-RESISTOR	3	
Q1	2SD1819A-R	TRANSISTOR	1	FOR VEP83356D/A	R22	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
Q2	2SB1218A-R	TRANSISTOR	1	FOR VEP83356D/A	R31	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
Q3-05	2SD1819A-R	TRANSISTOR	3	FOR VEP83356D/A	R34	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
					R41	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
					R42	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
					R47	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R52, 53	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2		R237	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	FOR VEP83356D/A
R54	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1		R238	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R56	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1		R239	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356E/B
R57	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1		R239	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP83356D/A
R58	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R240	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R59	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R241	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R60	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R242	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R61	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R243	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R62	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R244	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R66, 67	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2		R245	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R68	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1		R246	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R70	VRT0145	THERMISTOR	1		R249	ERJ3RBD512	M. RESISTOR CH 1/16W 5.1K	1	
R71	ERJ3GEYJ302	M. RESISTOR CH 1/16W 3K	1		R250	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R72	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1		R251	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R73	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R253	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R78	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83356D/A	R256	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83356D/A
R79	VRT0145	THERMISTOR	1		R257	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP83356D/A
R81	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	R258	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356D/A
R84	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	FOR VEP83356D/A	R259	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	FOR VEP83356D/A
R85	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP83356D/A	R261	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83356D/A
R86, 87	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	2	FOR VEP83356D/A	R262	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP83356D/A
R88	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	FOR VEP83356D/A	R263	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356D/A
R89	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83356D/A	R264	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	FOR VEP83356D/A
R90	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	FOR VEP83356D/A	R265	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	FOR VEP83356D/A
R91	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83356D/A	R266	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83356D/A
R92	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	FOR VEP83356D/A	R267	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP83356D/A
R93	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	FOR VEP83356D/A	R268	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356D/A
R94	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP83356D/A	R269	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	FOR VEP83356D/A
R95	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	FOR VEP83356D/A	R271	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83356D/A
R96	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83356D/A	R272	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP83356D/A
R97	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	FOR VEP83356D/A	R273	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356D/A
R98	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	FOR VEP83356D/A	R274	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	FOR VEP83356D/A
R99	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	FOR VEP83356D/A	R276	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	FOR VEP83356D/A
R111	ERJ3GEYJ473	M. RESISTOR CH 1/10W 47K	1	FOR VEP83356D/A	R277, 78	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP83356D/A
R112	ERJ3GEYJ563	M. RESISTOR CH 1/10W 56K	1	FOR VEP83356D/A	R279	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	FOR VEP83356D/A
R116-18	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	FOR VEP83356D/A	R280	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	FOR VEP83356D/A
R126	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R289	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	FOR VEP83356D/A
R136, 37	ERJ3GEYJ102	M. RESISTOR CH 1/10W 1K	2	FOR VEP83356D/A	R290	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356D/A
R140	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R291	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R144	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R292	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R150	ERJ3GEYJ821	M. RESISTOR CH 1/10W 820	1	FOR VEP83356D/A	R293	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1	
R151	ERJ3GEYJ102	M. RESISTOR CH 1/10W 1K	1	FOR VEP83356D/A	R294	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R153	ERJ3RBD102	M. RESISTOR CH 1/10W 1K	1	FOR VEP83356D/A	R295	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	FOR VEP83356D/A
R154	ERJ3GEYJ152	M. RESISTOR CH 1/10W 1.5K	1	FOR VEP83356D/A	R296	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83356D/A
R155	ERJ3GEYJ101	M. RESISTOR CH 1/10W 100	1	FOR VEP83356D/A	R301	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R156	ERJ3GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	FOR VEP83356D/A	R506	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R157	ERJ3GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP83356D/A	R507-09	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R158	ERJ3GEYJ152	M. RESISTOR CH 1/10W 1.5K	1	FOR VEP83356D/A	R512	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R162	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	R513, 14	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R163	ERJ3GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP83356D/A	R515, 16	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R164	ERJ3GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	FOR VEP83356D/A	R519, 20	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R165	ERJ3GEYJ102	M. RESISTOR CH 1/10W 1K	1	FOR VEP83356D/A	R521	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R166, 67	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	FOR VEP83356D/A	R522, 23	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R169	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	FOR VEP83356D/A	R524-26	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R170, 71	ERJ3GEYJ222	M. RESISTOR CH 1/10W 2.2K	2	FOR VEP83356D/A	R528	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R179	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83356D/A	R530-32	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	FOR VEP83356E/B
R180	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	FOR VEP83356D/A	R533-40	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	8	
R181	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356D/A	R541, 42	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R183	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1		R544	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R189, 90	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP83356E	R546, 47	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R195	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R1001-08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R196, 97	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2		R1009-12	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	4	FOR VEP83356D/A
R198	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R3001	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R205, 06	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2		R3003	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R220	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83356D/A	R3004	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R221	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	FOR VEP83356D/A	R3005	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R222	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R3006	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R227	ERJ3GEYJ270	M. RESISTOR CH 1/16W 27	1		R3007	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R230	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	FOR VEP83356E/B	R3008	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R232	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1		R3009	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R233	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83356E/B	R3011	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R233	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	FOR VEP83356D/A	R3100, 01	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R234	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1		R3102	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R235	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R3103	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R236	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R3104	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3105	ERJ6GEYJ5R6	M.RESISTOR CH 1/10W 5.6	1		R3343	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3106	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R3416	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3107	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		R3418	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3108, 09	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R3420	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3110	ERJ6GEYG270	M.RESISTOR CH 1/10W 27	1		R3423-25	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	3	
R3111	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R3426, 27	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3112	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		R3428, 29	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R3114	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R3431, 32	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2	
R3115	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		R3438	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3116	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3439	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3117	ERJ6GEYJ5R6	M.RESISTOR CH 1/10W 5.6	1		R3441-43	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3118	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R3444	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3119	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		R3445, 46	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3120, 21	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R3447	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3122	ERJ6GEYG270	M.RESISTOR CH 1/10W 27	1		R3448	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3123	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R3449, 50	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R3124	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		R3500	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3200-02	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3501	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3203-06	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	4		R3503	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3207, 08	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2		R3504	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3212, 13	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2		R3505	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3218	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1		R3506	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3219	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3508, 09	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3220	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1		R3510	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3221	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3511	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3222, 23	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R3512	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3224	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R3513	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3225, 26	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R3514	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3228	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3515	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3229	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R3516	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R3230	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R3517	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3231	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3518	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3232-34	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3519	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3237	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3520	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3238, 39	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2		R3521-23	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R3240	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R3524	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3241	ERJ14YJ270H	M.RESISTOR CH 1/4W 27	1		R3526	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3242-44	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3527, 28	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3245-48	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	4		R3529	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3249, 50	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2		R3530	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3251, 52	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2		R3531, 32	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R3253	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R3533	ERJ6GEYG221	M.RESISTOR CH 1/16W 220	1	
R3262, 63	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R3534	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3265	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3535	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3266	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R3536	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3268	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3537	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3269-71	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3538	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3274	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3540	ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R3275, 76	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2		R3541	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3277	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R3542	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3278	ERJ14YJ270H	M.RESISTOR CH 1/4W 27	1		R4001	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3280	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R4002, 03	ERJ14YJ682	M.RESISTOR CH 1/4W 6.8K	2	
R3287, 88	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2		R4004	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R3289, 90	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R4006, 07	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2	
R3291	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R4008, 09	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R3292	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1		R4010	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3301	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R4011, 12	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3309, 10	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2		R4014, 15	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	2	
R3318	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1		R4017, 18	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R3319	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R4019, 20	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	2	
R3320	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		R4021, 22	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3321, 22	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R4023-26	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	4	
R3323	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R4028	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3324, 25	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R4029	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3326, 27	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2		R4030	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3328, 29	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2		R4031	ERJ6RBD433	M.RESISTOR CH 1/10W 43K	1	
R3330	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R4032	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3331	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1		R4033, 34	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3332-34	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3		R4035	ERJ14YJ682	M.RESISTOR CH 1/4W 6.8K	1	
R3335, 36	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2		R4036	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3337	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R4037	ERJ14YJ682	M.RESISTOR CH 1/4W 6.8K	1	
R3338	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R4038	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3339	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R4039	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3340	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1		R4040, 41	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R3341	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R4042-44	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4045-47	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	3	
R4048, 49	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4050	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4101, 02	ERJ14YJ682	M. RESISTOR CH 1/4W 6.8K	2	
R4103, 04	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R4105	ERJ3GEYJ911	M. RESISTOR CH 1/16W 910	1	
R4106	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4110	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4111, 12	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4114	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R4115, 16	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4117, 18	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R4119-22	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R4123	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R4124	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4125	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R4126	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4127	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4128	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4129	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4130	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R4131	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	FOR VEP83356E/A/B
R4131	ERJ3GEYJ822	M. RESISTOR CH 1/16W 8.2K	1	FOR VEP83356D
R4132	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83356D/E/B
R4132	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP83356A
R4133	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4134	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R4135	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R4136	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R4138	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356A
R4139	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4140	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	FOR VEP83356D/E/B
R4140	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP83356A
R4141, 42	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4143	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4144	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4145	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	FOR VEP83356D/E/B
R4145	ERJ3GEYJ155	M. RESISTOR CH 1/16W 1.5M	1	FOR VEP83356A
R4146	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4201, 02	ERJ14YJ682	M. RESISTOR CH 1/4W 6.8K	2	
R4203, 04	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R4205	ERJ3GEYJ911	M. RESISTOR CH 1/16W 910	1	
R4206	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4210	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4211, 12	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4213	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R4215, 16	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4217, 18	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R4219-22	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R4223	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R4224	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4225	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R4226	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4227	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4228	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4229	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4230	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R4231	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	FOR VEP83356E/A/B
R4231	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	FOR VEP83356D
R4232	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83356D/E/B
R4232	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP83356A
R4233	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4234	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R4235	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R4236	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R4238	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356A
R4239	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R4240	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	FOR VEP83356D/E/B
R4240	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP83356A
R4241, 42	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4243	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4244	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4245	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	FOR VEP83356D/E/B
R4245	ERJ3GEYJ155	M. RESISTOR CH 1/16W 1.5K	1	FOR VEP83356A
R4246	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6001	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R6002-04	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	3	
R6005	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R6006-10	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R6011	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R6012	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R6013	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6014	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6015	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R6016	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R6017	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6018	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R6019	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6020	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R6021	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R6022	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6023	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6024	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6025	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6026	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6027	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6029, 30	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R6031-37	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	7	
R6038	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6039	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R6040	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R6041, 42	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R6043	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6044-52	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	9	
R6053-64	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	12	
R6065	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	FOR VEP83356D/A
R6066	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83356E/B
R6067	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R6068-71	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	4	
R6072, 73	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R6074-76	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R6077-80	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	4	
R6081-85	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R6087, 88	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R6089-92	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R6093-95	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R6096-98	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	3	
R6099	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
SW1001	VSS0367-04B	SWITCH	1	
SW4101	VSS0367-06B	SWITCH	1	
SW4201	VSS0367-06B	SWITCH	1	
SW6001	VSS0342	SWITCH	1	
TG6	EYF6CU	TEST POINT	1	
TG3001	EYF6CU	TEST POINT	1	
TG3300	EYF6CU	TEST POINT	1	
TG3500	EYF6CU	TEST POINT	1	
TG4001	EYF6CU	TEST POINT	1	
TH3500	VRT0139K103	THERMISTOR	1	
TP1-P4	EYF6CU	TEST POINT	4	FOR VEP83356D/A
TP7-15	EYF6CU	TEST POINT	9	FOR VEP83356D/A
TP501, 02	EYF6CU	TEST POINT	2	
TP3100, 01	EYF6CU	TEST POINT	2	
TP3200-03	EYF6CU	TEST POINT	4	
TP3300	EYF6CU	TEST POINT	1	
TP3500-08	EYF6CU	TEST POINT	9	
TP4001	EYF6CU	TEST POINT	1	
TP4004	EYF6CU	TEST POINT	1	
TP6001-04	EYF6CU	TEST POINT	4	
VC6001	VCV0049	TRIMMER	1	
VR5	EVW7JSX30B52	V. RESISTOR 500	1	FOR VEP83356D/A
VR6	EVW7JSX30B13	V. RESISTOR 1K	1	FOR VEP83356D/A
VR9	EVW7JGA00B14	V. RESISTOR 10K	1	
VR10	EVW7JSX30B22	V. RESISTOR 200	1	FOR VEP83356D/A
VR3200	EVW7JGA00B13	V. RESISTOR 1K	1	

AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR4003	EVN7JGA00B14	V. RESISTOR 10K	1	
VR4101	EVN7JGA00B14	V. RESISTOR 10K	1	
VR4201	EVN7JGA00B14	V. RESISTOR 10K	1	
X1	VXS0645	CRYSTAL OSCILLATOR	1	
X2	VXS0886	CRYSTAL OSCILLATOR	1	FOR VEP83356D/A
X2	VXS0937	CRYSTAL OSCILLATOR	1	FOR VEP83356E/B
X501	VXS0637	CRYSTAL OSCILLATOR	1	
X6002	VXS0883	CRYSTAL OSCILLATOR	1	
■ E9	VEP86258A	TEST PLUG P.C. BOARD	1	(RTL) FOR AJ-D215P/D200P
■ E9	VEP86258B	TEST PLUG P.C. BOARD	1	(RTL) FOR AJ-D215HE/D200HE
C6601-03	ECA0JM102	E. CAPACITOR 6.3V 1000U	3	FOR VEP86256B
D6601	MA142WK	DIODE	1	
P6601	VJS3826A020	CONNECTOR (FEMALE)	1	
P6602	VJS3791B026	CONNECTOR (FEMALE)	1	
P6603	VJP1923T	CONNECTOR (MALE)	1	
P6604	VJP3969A009	CONNECTOR (MALE)	1	
P6605	VJP1597T	CONNECTOR (MALE) 4P	1	
P6606	VJS2889A026	CONNECTOR (FEMALE)	1	
P6607	VJS2889A014	CONNECTOR (FEMALE)	1	
R6601	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	FOR VEP86258A
R6601	ERJ6GEYJ1R0	M. RESISTOR CH 1/10W 1	1	FOR VEP86256B
R6602	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	FOR VEP86258A
R6602	ERJ6GEYJ2R2	M. RESISTOR CH 1/10W 2.2	1	FOR VEP86256B
■ E10	VEP00Y55A-1	EVR FLEX P.C. BOARD	1	(RTL)
P3	VJS3961	CONNECTOR (FEMALE)	1	
■ E11	VEP22146A	SENSOR P.C. BOARD	1	(RTL) FOR AJ-D215P/D200P
■ E11	VEP22251B	SENSOR P.C. BOARD	1	(RTL) FOR AJ-D215HE/D200HE
C102	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C103	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C104	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C105	ECUX1C224ZFN	C. CAPACITOR CH 16V 0.22U	1	
C107	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C109	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C111	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C112	ECUX1H130GCV	C. CAPACITOR CH 50V 13P	1	FOR VEP22251B
C112, 13	ECUX1H130JCV	C. CAPACITOR CH 50V 13P	2	FOR VEP22146A
C113	ECUX1H160GCV	C. CAPACITOR CH 50V 16U	1	FOR VEP22251B
C114	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	1	FOR VEP22251B
C114	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	FOR VEP22146A
C115	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C116	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	FOR VEP22251B
C117	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	FOR VEP22251B
C117	ECST0JY153Z	T. CAPACITOR CH6.3V 0.015U	1	FOR VEP22146A
C118	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C119	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C120	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C123	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C124	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C125, 26	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	2	
C127, 28	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C129	ECST1DY475Z	T. CAPACITOR CH 20V 4.7U	1	
C130	ECST1VX155Z	T. CAPACITOR CH 35V 1.5U	1	
C131	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C132	ECST1CY685Z	T. CAPACITOR CH 16V 6.8U	1	
C133	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	1	
C134	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	FOR VEP22251B
C135	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C136	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	FOR VEP22251B
C137	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	1	
C138	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	1	
C139	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C140	ECUX1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C142	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C143-45	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	3	
C146	ECST0JD157Z	E. CAPACITOR CH6.3V 150U	1	
C147	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C148	ECST0JD157Z	E. CAPACITOR CH6.3V 150U	1	
C149	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C150	ECST0JD157Z	E. CAPACITOR CH6.3V 150U	1	
C151	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C152	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C153	ECST1CY685Z	T. CAPACITOR CH 16V 6.8U	1	
C154	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C155	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C158	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C159	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C161	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C162	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C163	ECUX1H223ZFN	C. CAPACITOR CH 50V 0.022U	1	
C500	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C501	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C504	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	FOR VEP22251B
C506	ECST0GY226Z	T. CAPACITOR CH 4V 22U	1	
C510-12	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	3	
C513-15	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	3	
C516-20	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	5	
C521	ECST0GY226Z	T. CAPACITOR CH 4V 22U	1	
C522	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C523	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	FOR VEP22251B
C523	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	FOR VEP22146A
C524	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C525-27	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	3	
C528	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C529	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	FOR VEP22251B
C529	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	FOR VEP22146A
C530-45	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	16	
C546	ECUX1A224KBV	C. CAPACITOR CH 10V 0.22U	1	
C546	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	FOR VEP22146A
C547	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C548, 49	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
C550-58	ECUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	9	
C559	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
C560	ECST0JY475Z	T. CAPACITOR CH6.3V 4.7U	1	
C561	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C562	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	1	
C563	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	1	
C564	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C565	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	1	
C566	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	1	
C567	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C568	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	1	
C569	ECUX1H100CCV	C. CAPACITOR CH 50V 10P	1	
C570	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C572, 73	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
C585	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C586	ECUX1A105ZFN	C. CAPACITOR CH 10V 1U	1	
C589	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
D101	MA121	DIODE	1	
D102-05	1SS355	DIODE	4	
D106	MA728	DIODE	1	
D107	1SS355	DIODE	1	
D109	1SS355	DIODE	1	
D502-05	1SS355	DIODE	4	



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL501-03	VLF1173	FILTER	3		R120	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22251B
IC101	NJM2902V	IC	1		R120	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22146A
IC102	TC7SHU04FU	IC	1		R121	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	
IC103	AN2018S	IC	1		R122	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
IC104	TC7SH08FU	IC	1		R123	ERJ3GEY6332	M. RESISTOR CH 1/16W 3.3K	1	
IC105	AN2018S	IC	1		R124	ERJ2GEJ273	M. RESISTOR CH 1/16W 27K	1	FOR VEP22251B
IC106	MN5236	IC	1		R124	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	FOR VEP22146A
IC107, 08	MB87882PFV	IC	2		R125	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
IC109	TVHC04FT	IC	1		R126	ERJ2GEJ391	M. RESISTOR CH 1/16W 390	1	
IC110	TC7SH04FU	IC	1		R127	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
IC111	TC7SH08FU	IC	1		R128	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	FOR VEP22251B
IC112	TC7SH04FU	IC	1		R128	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22146A
IC113	AN2018S	IC	1		R129	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22251B
IC114	TC7SH32FU	IC	1		R129	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22146A
IC504	UPC2391GB	IC	1		R130	ERJ2GEJ183	M. RESISTOR CH 1/16W 18K	1	FOR VEP22251B
IC505	TA75W01FU	IC	1		R130	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	FOR VEP22146A
IC506	AK6480HF	IC	1		R131	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	
IC507	MB88344PFV	IC	1		R132	ERJ2GEJ333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22251B
IC508	RN5RG46AA	IC	1	FOR VEP22251B	R132	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22146A
L102	ELJPC100KF	COIL 10UH	1	FOR VEP22251B	R133	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	1	
L102, 03	ELJPC6R8KF	COIL 6.8UH	2		R134	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22251B
L104, 05	VLF1144A102	COIL 1000UH	2	FOR VEP22251B	R134	ERJ2RHD332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP22146A
L106-08	ELJPC6R8KF	COIL 6.8UH	3		R135	ERJ2GEJ224	M. RESISTOR CH 1/16W 220K	1	
L109	ELJPA101KF	COIL 100UH	1	FOR VEP22146A	R136	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP22251B
L109	VLQ0319K101	COIL 100UH	1	FOR VEP22251B	R136	ERJ2RHD272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP22146A
L110	ELJPA101KF	COIL 100UH	1	FOR VEP22146A	R137	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	FOR VEP22251B
L110	VLQ0319K101	COIL 100UH	1	FOR VEP22251B	R137	ERJ2RHD682	M. RESISTOR CH 1/16W 6.8K	1	FOR VEP22146A
L111	ELJPA101KF	COIL 100UH	1	FOR VEP22146A	R138, 39	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	2	
L111	VLQ0319K101	COIL 100UH	1	FOR VEP22251B	R140	ERJ2GEJ184	M. RESISTOR CH 1/16W 180K	1	
L112	ELJPC6R8KF	COIL 6.8UH	1		R141	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1	
L113	VLP0154	COIL	1		R142	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1	
L114	ELJPA330KF	COIL 33UH	1	FOR VEP22146A	R143, 44	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP22146A
L114	VLQ0319K330	COIL 33UH	1	FOR VEP22146A	R145	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	
L501	ELJPC150KF	COIL 15UH	1		R146	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
L507	VLQ0319M6R8	COIL 6.8UH	1	FOR VEP22251B	R147	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
L508-10	ELJFC220JB	COIL 22UH	3		R147	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP22251B
L512	ELJPC150KF	COIL 15UH	1		R148	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
L513	VLQ0319M6R8	COIL 6.8UH	1	FOR VEP22251B	R148	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
PP101	VJP2962A026	CONNECTOR (MALE)	1		R149	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
PP501	VJP3681B044	CONNECTOR (MALE)	1		R149	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
Q102	2SC3930	TRANSISTOR	1		R150	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
Q103	2SD2216	TRANSISTOR	1		R150	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
Q104	XP4601	TRANSISTOR-RESISTOR	1		R151	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
Q105, 06	2SC3930	TRANSISTOR	2		R151	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
Q107	XP4654	TRANSISTOR-RESISTOR	1		R152	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
Q501-03	2SB1462	TRANSISTOR	3		R152	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
Q504	2SB1073	TRANSISTOR	1		R153	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A
Q505	2SB970X	TRANSISTOR	1		R153	ERJ2GEJ330	M. RESISTOR CH 1/16W 33	1	FOR VEP22251B
Q506	XP4601	TRANSISTOR-RESISTOR	1		R154	ERJ2GEJ111	M. RESISTOR CH 1/16W 110	1	FOR VEP22251B
QR502	MRN1103	TRANSISTOR	1	FOR VEP22146A	R501-06	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	6	
R101	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1		R507	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	FOR VEP22146A
R102	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP22251B	R507	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	1	FOR VEP22251B
R102	ERJ2RHD222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP22146A	R508	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R103, 04	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	2		R509	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	1	FOR VEP22146A
R105	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		R509	ERJ2GEJ182	M. RESISTOR CH 1/16W 1.8K	1	FOR VEP22251B
R106	ERJ3GEY6753	M. RESISTOR CH 1/16W 75K	1		R510	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R107	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1		R511	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	1	FOR VEP22146A
R108, 09	ERJ2GEJ184	M. RESISTOR CH 1/16W 180K	2		R511	ERJ2GEJ182	M. RESISTOR CH 1/16W 1.8K	1	FOR VEP22251B
R110	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1		R512	ERJ2GEJ272	M. RESISTOR CH 1/16W 2.7K	1	
R111	ERJ2GEJ273	M. RESISTOR CH 1/16W 27K	1	FOR VEP22251B	R513	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1	
R111	ERJ2RHD183	M. RESISTOR CH 1/16W 18K	1	FOR VEP22146A	R514	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R112	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	1	FOR VEP22251B	R515	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	1	
R112	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22146A	R516	ERJ2RHD333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22251B
R113	ERJ2GEJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP22251B	R516	ERJ3GEY6333	M. RESISTOR CH 1/16W 33K	1	FOR VEP22146A
R113	ERJ2RHD391	M. RESISTOR CH 1/16W 390	1	FOR VEP22146A	R517	ERJ2RHD132X	M. RESISTOR CH 1/16W 1.3K	1	FOR VEP22251B
R114, 15	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	2		R517	ERJ3GEY6132	M. RESISTOR CH 1/16W 1.3K	1	FOR VEP22146A
R116	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	1		R518	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R117, 18	ERJ2GEJ331	M. RESISTOR CH 1/16W 330	2		R519	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1	
R119	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	1		R520, 21	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	2	
					R522	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1	
					R523	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
					R524	ERJ3GEY6103	M. RESISTOR CH 1/16W 10K	1	
					R525	ERJ3GEY6513	M. RESISTOR CH 1/16W 51K	1	
					R526	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
					R527	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R528	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1		C307-10	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	4	
R529	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	1		C311, 12	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	2	
R530	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1		C313-16	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	4	
R531	ERJ2GEJ681	M. RESISTOR CH 1/16W 680	1		C317	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
R532	ERJ3GEYG103	M. RESISTOR CH 1/16W 10K	1		C318, 19	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
R533, 34	ERJ3GEYG513	M. RESISTOR CH 1/16W 51K	2		C320	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
R535	ERJ3GEYG103	M. RESISTOR CH 1/16W 10K	1		C321, 22	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
R536	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1		C323	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
R537, 38	ERJ2GEJ152	M. RESISTOR CH 1/16W 1.5K	2		C324, 25	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
R539	ERJ2RHD203X	M. RESISTOR CH 1/16W 20K	1	FOR VEP22251B	C326, 27	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	2	
R539	ERJ3GEYG203	M. RESISTOR CH 1/16W 20K	1	FOR VEP22146A	C328-38	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	11	
R540	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	FOR VEP22251B	C339, 40	ECST0GY226Z	T. CAPACITOR CH 4V 22U	2	
R540	ERJ3GEYG104	M. RESISTOR CH 1/16W 100K	1	FOR VEP22146A	C341, 42	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
R541	ERJ2RHD104	M. RESISTOR CH 1/16W 100K	1	FOR VEP22251B	C343	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
R541	ERJ3GEYG104	M. RESISTOR CH 1/16W 100K	1	FOR VEP22146A	C344	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	1	
R542	ERJ2RHD683X	M. RESISTOR CH 1/16W 68K	1	FOR VEP22251B	C345	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
R542	ERJ3GEYG683	M. RESISTOR CH 1/16W 68K	1	FOR VEP22146A	C346	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
R549	ERJ2GEJ100	M. RESISTOR CH 1/16W 10	1		C347	ECST0GY226Z	T. CAPACITOR CH 4V 22U	1	
R550	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1		C348	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
R551	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1		C349	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	1	
R552, 53	ERJ2GEJ560	M. RESISTOR CH 1/16W 56	2		C350	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	FOR VEP23422B
R554	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1		C351	ECUX1H232FV	C. CAPACITOR CH 50V 0.022U	1	
R555	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C352	ECUX1C474KBN	C. CAPACITOR CH 16V 0.47U	1	
R556	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1		C353	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
R557	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	1		C354	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	1	
R558	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C355-57	ECUX1H232FV	C. CAPACITOR CH 50V 0.022U	3	
R559	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	1		C358	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	
R560-62	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	3		C359	ECUX1H080CCV	C. CAPACITOR CH 50V 8P	1	
R563-65	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	3		C360	ECA1CM471B	E. CAPACITOR 16V 470P	1	FOR VEP23285B
R566	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	1		C361	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
R567	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1		C701	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
R568	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C702	ECST0JX476Z	T. CAPACITOR CH6.3V 47U	1	FOR VEP23422B
R569	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1		C703	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
R570	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C704	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
R571	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1		C709	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
R572	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C711	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
R573-75	ERJ2GEJ392	M. RESISTOR CH 1/16W 3.9K	3		C712	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
R576	ERJ2GEJ822	M. RESISTOR CH 1/16W 8.2K	1		C713	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
R577	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C714, 15	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
R578	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1		C716	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
R579	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1		C717	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1	
R580	ERJ2GEJ154	M. RESISTOR CH 1/16W 150K	1		C718	ECEV1CA470P	E. CAPACITOR CH 16V 47U	1	
R581	ERJ2GEJ560	M. RESISTOR CH 1/16W 56	1		C719	ECUX1H103ZFY	C. CAPACITOR CH 50V 0.01U	1	
R582	ERJ2GEJ104	M. RESISTOR CH 1/16W 100K	1		C720	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
R583	ERJ2GEJ222	M. RESISTOR CH 1/16W 2.2K	1		C721	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
R584	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	1		C724, 25	ECUX1H103ZFY	C. CAPACITOR CH 50V 0.01U	2	
					C726	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
W101, 02	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP22146A	C727	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
W105, 06	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	2		C728	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
W107	ERJ6GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP22146A	C729	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
W110-12	ERJ2GE0R00	M. RESISTOR CH 1/16W 0	3		C730	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
					C731	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
X101	VSC0685	CRYSTAL OSCILLATOR	1	FOR VEP22146A	C732	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
X101	VSX0819	CRYSTAL OSCILLATOR	1	FOR VEP22251B	C733	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
		MISCELLANEOUS			C734, 35	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
					C736	ECUX1H232FV	C. CAPACITOR CH 50V 0.022U	1	
					C741	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
	VSC4220	CAMERA SHIELD CASE (A)	1	FOR VEP22146A	C742	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
	VSC4221	CAMERA SHIELD CASE (B)	1	FOR VEP22146A					
	VMZ2539	SENSOR SHIELD BARRIER	1	FOR VEP22146A	D301	1SS355	DIODE	1	
					FP301	VJS3320B026	CONNECTOR (FEMALE)	1	
					FP302	VJS3320B040	CONNECTOR (FEMALE)	1	
					FP303	VJS3320B020	CONNECTOR (FEMALE)	1	
					FP304	VJS3320B014	CONNECTOR (FEMALE)	1	
■ E12	VEP23285B	PROCESS P. C. BOARD	1	(RTL)FOR AJ-D215P/D200P	FP305	VJS3452A013	CONNECTOR (FEMALE)	1	
■ E12	VEP23422B	PROCESS P. C. BOARD	1	(RTL)FOR AJ-D215HE/D200HE	FP701	VJS2960A024	CONNECTOR (FEMALE)	1	
C301	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	1		IC301	XC61AN2712M	IC	1	
C302	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		IC302	MN1020701M6Z	IC	1	FOR VEP23285B
C303	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	1		IC302	MN1020701M8J	IC	1	FOR VEP23422B
C304	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1		IC303	UPC2384GA	IC	1	
C305	ECST0GY226Z	T. CAPACITOR CH 4V 22U	1		IC304	MN67344A1	IC	1	
C306	ECST0JY156Z	T. CAPACITOR CH6.3V 15U	1		IC305	MN67343A2	IC	1	
					IC306	MN4795F	IC	1	FOR VEP23285B

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	
IC306	MSM548333	IC	1	FOR VEP23422B	R336	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1		
IC307	MN4795F	IC	1	FOR VEP23285B	R337	ERJ2GEJ221	M.RESISTOR CH 1/16W 220	1		
IC307	MSM548333	IC	1	FOR VEP23422B	R338	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1		
IC308	TA75W01FU	IC	1		R339, 40	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	2		
IC309-11	MN65761	IC	3		R341, 42	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	2		
IC312	LZ9GA11	IC	1		R343, 44	ERJ2GEJ152	M.RESISTOR CH 1/16W 1.5K	2	FOR VEP23285B	
IC313	TC7SH08FU	IC	1	FOR VEP23422B	R345	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1		
IC316	XC62AP2502M	IC	1		R346-53	ERJ2GEJ101	M.RESISTOR CH 1/16W 100K	8	FOR VEP23285B	
IC317	TC4S584F	IC	1		R354, 55	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	2		
IC318	TC7SH04F	IC	1	FOR VEP23285B	R356, 57	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	2		
IC701	TC4S584F	IC	1		R358-70	ERJ2GEJ101	M.RESISTOR CH 1/16W 100K	13	FOR VEP23285B	
IC702	LB1830W	IC	1		R371-78	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	8		
IC703	TB6512AF	IC	1		R379-83	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	5		
IC704	TA75W01FU	IC	1		R384, 85	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	2	FOR VEP23285B	
IC705	TC9074F	IC	1		R386	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP23285B	
IC706, 07	NJM2902V	IC	2		R387, 88	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	2	FOR VEP23285B	
IC708	MN1882421M3J	IC	1	FOR VEP23285B	R701	ERJ2GEJ152	M.RESISTOR CH 1/16W 1.5K	1		
IC708	MN1882421M8K	IC	1	FOR VEP23422B	R702	ERJ2GEJ224	M.RESISTOR CH 1/16W 220K	1		
L301	VLQ0319M6R8	COIL	6.8UH	1	FOR VEP23422B	R703	ERJ2GEJ823	M.RESISTOR CH 1/16W 82K	1	
L303-05	ELJPC6R8KF	COIL	6.8UH	3		R704, 05	ERJ3GEYJ3R3	M.RESISTOR CH 1/16W 30K	2	
L306	ELJPA330KF	COIL	33UH	1	FOR VEP23285B	R706, 07	ERJ3GEYJ3R3	M.RESISTOR CH 1/16W 3, 3	2	
L306	VLQ0319K330	COIL	33UH	1	FOR VEP23422B	R708	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
L307	ELJPA330KF	COIL	33UH	1	FOR VEP23285B	R709	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
L307	VLQ0319K330	COIL	33UH	1	FOR VEP23422B	R710	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
L308	ELJPC6R8KF	COIL	6.8UH	1		R711	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	FOR VEP23285B
L309	VLQ0319M6R8	COIL	6.8UH	1		R711	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	FOR VEP23285B
L310-12	VLP0154	COIL		3		R712	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
L313-15	ELJPC6R8KF	COIL	6.8UH	3		R713	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
L317	VLP0154	COIL		1		R714	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
L318	ERJ3GEYJ270	M.RESISTOR CH 1/16W	27	1		R715	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
L319	VLP0154	COIL		1		R716	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
L320	ELJPC6R8KF	COIL	6.8UH	1		R717	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
L321	ELJPA101KF	COIL	100UH	1	FOR VEP23285B	R718	ERJ2GEJ225	M.RESISTOR CH 1/16W 2.2M	1	
L321	VLQ0319K101	COIL	100UH	1	FOR VEP23422B	R719	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
L322	ELJPA101KF	COIL	100UH	1	FOR VEP23285B	R721	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	1	
L322	VLQ0319K101	COIL	100UH	1		R722	ERJ2GEJ183	M.RESISTOR CH 1/16W 18K	1	
L323	ELJNA1R5JF	COIL	1.5UH	1		R723	ERJ2GEJ154	M.RESISTOR CH 1/16W 150K	1	
L324-27	VLP0154	COIL		4	FOR VEP23422B	R724	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
L330	ELJPA6R8MF	COIL	6.8UH	1	FOR VEP23285B	R725	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
L330	VLQ0319M6R8	COIL	6.8UH	1	FOR VEP23422B	R726	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
L701	ELJPC6R8KF	COIL	6.8UH	1		R727	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
L702	ELJPC220KF	COIL	22UH	1		R728	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
L703, 04	ELJPC6R8KF	COIL	6.8UH	2		R729	ERJ2GEJ183	M.RESISTOR CH 1/16W 18K	1	
L705	ELJPA150KF	COIL	15UH	1	FOR VEP23285B	R730	ERJ2GEJ682	M.RESISTOR CH 1/16W 6.8K	1	
L705	VLQ0319K150	COIL	15UH	1	FOR VEP23422B	R731	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
L706	ELJPC150KF	COIL	15UH	1		R732	ERJ2GEJ563	M.RESISTOR CH 1/16W 56K	1	
L707	ELJPA331KF	COIL	330UH	1	FOR VEP23285B	R733	ERJ2GEJ224	M.RESISTOR CH 1/16W 220K	1	
L707	VLQ0319K331	COIL	330UH	1	FOR VEP23422B	R734, 35	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	2	
PP701	VJP3644B034	CONNECTOR (MALE)		1		R736	ERJ2GEJ474	M.RESISTOR CH 1/16W 470K	1	
PS301	VJS3683A044	CONNECTOR (FEMALE)		1		R737	ERJ2GEJ394	M.RESISTOR CH 1/16W 390K	1	
Q704	XP4501	TRANSISTOR-RESISTOR		1		R739	ERJ2GEJ183	M.RESISTOR CH 1/16W 18K	1	
QR701	XP1211	TRANSISTOR-RESISTOR		1		R740	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R301, 02	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	2	FOR VEP23422B	R741	ERJ2GEJ563	M.RESISTOR CH 1/16W 56K	1		
R303	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1		R742	ERJ2GEJ393	M.RESISTOR CH 1/16W 39K	1		
R304	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	FOR VEP23285B	R743	ERJ2GEJ822	M.RESISTOR CH 1/16W 8.2K	1		
R305-07	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	3		R744	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1		
R308	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1		R745	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1		
R309, 10	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	2		R746	ERJ2GEJ682	M.RESISTOR CH 1/16W 6.8K	1		
R311	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1		R747, 48	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	2		
R312	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1		R749	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		
R313, 14	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	2		R750	ERJ3GEYJ303	M.RESISTOR CH 1/16W 30K	1		
R315-17	ERJ2GEJ392	M.RESISTOR CH 1/16W 3.9K	3		R751	ERJ2GEJ154	M.RESISTOR CH 1/16W 150K	1		
R318, 19	ERJ2GEJ152	M.RESISTOR CH 1/16W 1.5K	2	FOR VEP23285B	R752	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1		
R320-28	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	9		R753	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP23285B	
R330	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1		R754	ERJ2GEJ152	M.RESISTOR CH 1/16W 1.5K	1		
R331, 32	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	2		R756	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1		
R333	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	1		R757	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1		
R334	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1		R758	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1		
R335	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1		R759, 60	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	2		
					R761	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1		
					R762	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	FOR VEP23285B	
					R763	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1		
					R765-68	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	4		
					R769	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1		
					R770-79	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	10		



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R780	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1
R781, 82	ERJ2GEJ473	M. RESISTOR CH 1/16W 47K	2	
R783, 84	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	2	
R785	ERJ2GEJ472	M. RESISTOR CH 1/16W 4.7K	1	
R786, 87	ERJ2GEJ105	M. RESISTOR CH 1/16W 1M	2	
R788	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R789	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1
R790	ERJ2GEJ153	M. RESISTOR CH 1/16W 15K	1	
R792	ERJ2GEJ103	M. RESISTOR CH 1/16W 10K	1	
R793-99	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	7
R801-04	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	4
R805	ERJ2GEJ102	M. RESISTOR CH 1/16W 1K	1	
R806	ERJ2GEJ332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP23285B
RA301-03	EXB24V103J	COMBI. R-R	10K	3
RA304-11	EXB24V101J	COMBI. R-R	100	8
RA312	EXB24V103J	COMBI. R-R	10K	1
RA313, 14	EXB24V331J	COMBI. R-R	330	2 FOR VEP23285B
RA315, 16	EXB24V101J	COMBI. R-R	100	2 FOR VEP23285B
RA317	EXB24V103J	COMBI. R-R	10K	1
RA318-23	EXB24V102J	COMBI. R-R	1K	6
RA324, 25	EXB24V103J	COMBI. R-R	10K	2
RA326-35	EXB24V101J	COMBI. R-R	100	10 FOR VEP23285B
RA336, 37	EXB24V103J	COMBI. R-R	10K	2 FOR VEP23285B
RA338	EXB24V101J	COMBI. R-R	100	1 FOR VEP23285B
RA339	EXB24V103J	COMBI. R-R	10K	1 FOR VEP23285B
RA340, 41	EXB24V152J	COMBI. R-R	1.5K	2 FOR VEP23422B
RA342-45	EXB24V101J	COMBI. R-R	100	4 FOR VEP23285B
TH701	VRT0035K152	THERMISTOR		1
W302, 03	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	2 FOR VEP23285B
W305	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W305	ERJ6GEY0R00	M. RESISTOR CH 1/10W	0	1 FOR VEP23285B
W307	ERJ6GEY0R00	M. RESISTOR CH 1/10W	0	1 FOR VEP23285B
W311	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W313	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W315	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1
W317	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W322	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W327	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1
W328	ERJ3GEY0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W330	ERJ6GEY0R00	M. RESISTOR CH 1/10W	0	1 FOR VEP23285B
W332	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W334	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W704	ERJ3GEY0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23285B
W705	ERJ2GE0R00	M. RESISTOR CH 1/16W	0	1 FOR VEP23422B
X301	EF0S1005E5	CERAMIC RESONATOR		1
X701	EF0S1205E5	CERAMIC RESONATOR		1
■ E13	VEP80A32A	ATW SENSOR P.C. BOARD		1 (RTL)
C1	ECST0JY106Z	T. CAPACITOR CH6.3V 10U		1
C2	ECST0JY475Z	T. CAPACITOR CH6.3V 4.7U		1
C3	ECUM1C104KBN	C. CAPACITOR CH 16V 0.1U		1
IC1	M52944FP	IC		1
L1	VLQ0464	COIL		1
P1	VJS3452A014	CONNECTOR (FEMALE)		1
Q1	UN2212	TRANSISTOR-RESISTOR		1
R1	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K		1
		MISCELLANEOUS		
	VG03310	1R PLATE HOLDER R		1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	V603306	IR PLATE SPACER	1	
	VDL0397	IR CUT FILTER	1	
■ E14	VEP00U25B	VTR START P.C.BOARD	1 (RTL)	
SW1	EVQ0SB04B	SWITCH	1	
		MISCELLANEOUS		
	VST0321	TOGGLE SW	1	
	VEE0A97	VTR START CABLE	1	
■ E15	VEP86143B	OPERATE P.C.BOARD	1 (RTL)	
D6001-03	BR1102W-1	DIODE	3	
P501	VJP3125B010	CONNECTOR (MALE)	1	
SW6001-05	EVQPHL03T	SWITCH	5	
		MISCELLANEOUS		
	VEE8349	OPERATE CABLE	1	
	VEE0A91	OPERATE SW CABLE	1	
■ E16	VEP80A15A	TOGGLE SW P.C.BOARD	1 (RTL)	
J1	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
P9300	VJP1610T	CONNECTOR (MALE)	1	
SW9300, 01	VST0188	SWITCH	2	
SW9302	VST0187	SWITCH	1	
SW9303	VST0320	SWITCH	1	
		MISCELLANEOUS		
	VMP4267	P.C.B. HOLDER ANGLE	1	
■ E17	VEP80A16A	POWER SW P.C.BOARD	1 (RTL)	
P9400	VJP1607T	CONNECTOR (MALE)	1	
SW9400	VST0299	TOGGLE SWITCH	1	
■ E18	VEP80A17A	MODE CHECK P.C.BOARD	1 (RTL)	
P9401	VJP1607T	CONNECTOR (MALE)	1	
SW9401	EV00S205K	SWITCH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E19	VEP80A18A	MONITOR VR P.C.BOARD	1 (RTL)	
VR9200	VRV0270	SWITCH	1	
■ E20	VEP80A19A	BACK UP P.C.BOARD	1 (RTL)	
		MISCELLANEOUS		
	BCR20H4	BATTERY HOLDER	1	
■ E21	VEP80A21A	FLEX RING P.C.BOARD	1 (RTL)	
SW9100	EVQOS205K	SWITCH	1	
■ E22	VEP86264A	R SIDE P.C.BOARD	1 (RTL)FOR AJ-D215P/HE/D200HE	
■ E22	VEP86259A	R SIDE P.C.BOARD	1 (RTL)FOR AJ-D200P	
C6501, 02	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C6503, 04	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	2	
C6505	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6506	ECEA0JKS331	E.CAPACITOR 6.3V 330U	1	
C6515	ECEA1EKS220	E.CAPACITOR 25V 22U	1	
C6516	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6517	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6518	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C6519	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6520	ECEA0JKS331	E.CAPACITOR 6.3V 330U	1	
C6521	ECEA1CSN4R7	E.CAPACITOR 16V 4.7U	1	
C6522	ECEA1EKS3R3	E.CAPACITOR 25V 3.3U	1	
C6523	ECEA0JSN470	E.CAPACITOR 6.3V 47U	1	FOR VEP86264A
C6524	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6525, 26	ECEA0JKS330	E.CAPACITOR 6.3V 33U	2	
C6527	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C6528	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6529	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6530	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6531	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C6532-34	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
D6501-06	MA142K	DIODE	6	
D6508	MA142K	DIODE	1	
D6510-13	MA142K	DIODE	4	
D6514	HZ16-1L	DIODE	1	
D6515	MA704	DIODE	1	
D6516	MA142K	DIODE	1	
D6518-22	MA142K	DIODE	5	
IC6501	UPD75316BE83	IC	1	
IC6502	S8420BF	IC	1	
IC6503	NJU7112AM	IC	1	
IC6504	S81350HG	IC	1	
IC6505	MC14013BF	IC	1	
IC6506	MC14001BF	IC	1	
IC6507	MC14011BF	IC	1	
IC6508, 09	MC14538BF	IC	2	
P6501	VJP1614T	CONNECTOR (MALE)	1	
P6502	VJP1607T	CONNECTOR (MALE)	1	
P6503	VJP1614T	CONNECTOR (MALE)	1	
P6504	VJP1610T	CONNECTOR (MALE)	1	FOR VEP86264A
Q6501, 02	2SD968-R	TRANSISTOR	2	
QR6501, 02	UN5213	TRANSISTOR-RESISTOR	2	
QR6503	UN5211	TRANSISTOR-RESISTOR	1	
QR6504	UN5213	TRANSISTOR-RESISTOR	1	
QR6505	UN5113	TRANSISTOR-RESISTOR	1	
QR6508	UN5113	TRANSISTOR-RESISTOR	1	
QR6509	UN5213	TRANSISTOR-RESISTOR	1	
R6501-04	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R6505	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R6506-08	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	3	
R6509-16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R6517-24	ERJ6GEYG823	M.RESISTOR CH 1/10W 82K	8	
R6525	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6526	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
R6527	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R6528	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R6529	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6530	ERJ6RBD104	M.RESISTOR CH 1/10W 100K	1	
R6531	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R6532, 33	ERJ6RBD563	M.RESISTOR CH 1/10W 56K	2	
R6534	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R6535	ERJ6GEYG155	M.RESISTOR CH 1/10W 1.5M	1	
R6536	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R6538	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6540	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6542	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6543	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6544	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R6545-48	ERJ14YJ100	M.RESISTOR CH 1/4W 10	4	
R6549	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R6550	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6551	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6552	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6553	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R6554	ERJ6GEYF124	M.RESISTOR CH 1/10W 120K	1	
R6555	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R6556	ERJ6GEYF124	M.RESISTOR CH 1/10W 120K	1	
R6557	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R6558, 59	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	FOR VEP86264A
SW6501-04	EVQOSB04B	SWITCH	4	
SW6505-07	VSS0186	SWITCH	3	
TP6501-04	EYF6CU	TEST POINT	4	
VR6501, 02	VRV0080	V.RESISTOR	2	
W51-63	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	13	FOR VEP86264A
X6501	VSX0094C	CRYSTAL OSCILLATOR	1	
X6502	VSX0140	CRYSTAL OSCILLATOR	1	
■ E23	VEP27086A	H DEF P.C. BOARD	1 (RTL)	
C7401, 02	ECEA1AGE221	E.CAPACITOR 10V 220U	2	
C7403	VCF0066J123	P.CAPACITOR 160V 0.012U	1	
C7404	VCF0066J332	P.CAPACITOR 160V 3300P	1	
C7407	ECEA1HGE101	E.CAPACITOR 50V 100U	1	
C7408, 09	ECKD3A472MEH	C.CAPACITOR 1KV 4700P	2	
C7410	VCF0066J223	P.CAPACITOR 160V 0.022U	1	
C7414	VCF0066J182	P.CAPACITOR 160V 1800P	1	

## AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C7416	VCEA0JAP330	C.CAPACITOR 6.3V 33P	1		C7039	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C7417	ECEA1AGE221	E.CAPACITOR 10V 220U	1		C7040	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1	
D7401	EC11FS2	DIODE	1		C7041	VCF0066J223	P.CAPACITOR 160V 0.022U	1	
D7402, 03	MA142K	DIODE	2		C7044	ECCFH331JC	C.CAPACITOR 50V 330P	1	
D7404	EC11FS2	DIODE	1		D7001	MA3180	DIODE	1	
D7405	MA142K	DIODE	1		D7002	EC100S0412	DIODE	1	
L7402	ELH5L220	COIL 22UH	1		D7003	MA142K	DIODE	1	
L7403	VLQEL06F220J	COIL 22UH	1		D7004	MA143	DIODE	1	
L7404	VL00620	COIL	1		IC7001	TL5001CPS	IC	1	
P7007	VJP2264	CONNECTOR (MALE)	1		IC7002	HA11423MP	IC	1	
P7011	VJP1232T	CONNECTOR (MALE) 5P	1		IC7003	AN77L09M	IC	1	
P7013	VJP1595T	CONNECTOR (MALE) 2P	1		L7001	VL00177K151	COIL 150UH	1	
Q7402, 03	2SK1954	TRANSISTOR	2		L7002-04	VL00319M6R8	COIL 6.8UH	3	
R7405	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		P7002	VJP1597T	CONNECTOR (MALE) 4P	1	
R7406	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		P7014	VJP1595T	CONNECTOR (MALE) 2P	1	
R7408	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1		P7016	VJP2277	CONNECTOR (MALE)	1	
R7409, 10	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	2		Q7001	2SD1819A-R	TRANSISTOR	1	
R7411, 12	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2		Q7002	2SB1218A-R	TRANSISTOR	1	
R7413, 14	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	2		Q7003	2SJ278	TRANSISTOR	1	
R7417	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		Q7005	2SD1819A-R	TRANSISTOR	1	
R7418	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		Q7006	2SC3624	TRANSISTOR	1	
R7419	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		Q7007	2SD1819A-R	TRANSISTOR	1	
R7420	ERJ3GEYJ910	M.RESISTOR CH 1/16W 91	1		Q7008	2SA1411	TRANSISTOR	1	
▲ T7401	ETF18L34A	TRANSFORMER	1		Q7010	2SD1819A-R	TRANSISTOR	1	
TP7401	EYF6CU	TEST POINT	1		▲ R7001	ER016NK1R0	F.RESISTOR 1	1	
TPG	EYF6CU	TEST POINT	1		R7002	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
VR7402	EVMLRGA00B16	V.RESISTOR 1M	1		R7003	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
VR7403	EVML3GA00B55	V.RESISTOR 500K	1		R7004, 05	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
					R7006	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
					R7007	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
					R7008	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
					R7010	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
					R7011	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
					R7013	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
					R7014	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
					R7015	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
■ E24	VEP27087A	V DEF P.C.BOARD	1 (RTL)		R7016	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
					R7017	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
					R7018	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
					R7019	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
C7001	ECA1EF0121	E.CAPACITOR 25V 120U	1		R7020	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
C7002	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1		R7021	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
C7003	ECA0JKF121	E.CAPACITOR 6.3V 120U	1		R7022	ERJ6RBD133	M.RESISTOR CH 1/10W 13K	1	
C7005	ECGC1BB4R7	C.CAPACITOR 12V 4.7P	1		R7023	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
C7007	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1		R7024	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
C7009	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1		R7025	RD10UMB1	DIODE	1	
C7010	ECST1CY105Z	T.CAPACITOR CH 16V 1U	1		R7026	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
C7011	ECUX1E223KBV	C.CAPACITOR CH 25V 0.023U	1		R7027	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
C7012	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1		R7028	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
C7013	ECSF1VM105X	E.CAPACITOR 35V 1M	1		R7029	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
C7014	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1		R7030	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
C7015	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1		R7032	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
C7016	ECUM1H222JN	C.CAPACITOR CH 50V 2200P	1		R7033	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
C7017	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1		R7034	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
C7018	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1		R7035	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
C7019	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1		R7036	ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
C7020	ECST1CY105Z	T.CAPACITOR CH 16V 1U	1		R7037	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
C7021	ECST1CY335Z	T.CAPACITOR CH 16V 3.3U	1		R7038	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
C7022	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1		R7039	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
C7023	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1		R7040	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
C7024	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	1		R7041	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
C7025	ECA0JKF121	E.CAPACITOR 6.3V 120U	1		R7042	ERJ3GEYJ120	M.RESISTOR CH 1/16W 12	1	
C7026, 27	ECST1CX106Z	T.CAPACITOR CH 16V 10U	2		R7043	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
C7028	ECUX1H272KBV	C.CAPACITOR CH 50V 2700P	1		R7050	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
C7029	ECST1CX106Z	T.CAPACITOR CH 16V 10U	1		R7051	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
C7033	ECA1CKF560	E.CAPACITOR 16V 56U	1		R7052	ERJ3GEYJ912	M.RESISTOR CH 1/16W 9.1K	1	
C7035	VCEA1CAP330	C.CAPACITOR 16V 33U	1		R7053	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
C7036	ECA0JKF121	E.CAPACITOR 6.3V 120U	1		TP7001, 02	EYF6CU	TEST POINT	2	
C7037	ECUM1H222JN	C.CAPACITOR CH 50V 2200P	1						
C7038	VCEA1EAP150	E.CAPACITOR 25V 15U	1						

[illegible]

AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E28	VEP86286A	PRE SHUFFLE P.C. BOARD	1	(RTL)FOR AJ-D215HE
■ E28	VEP83357A	PRE SHUFFLE P.C. BOARD	1	(RTL)FOR AJ-D200HE
C3007, 08	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3010	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3012	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3013	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3014	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3015	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3026	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3027	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3031	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3033	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3034	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3055	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3057	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3064	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3065	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3101-05	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
C3110, 11	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3203	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3204	ECEV0JV330Q	E. CAPACITOR CH6.3V 33U	1	
C3206	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3207	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C3209-11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3212	ECUM1C474KBM	C. CAPACITOR CH 16V 0.47U	1	
C3213	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3234, 35	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3242	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C3243	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3250	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3251	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3252	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3253	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3254	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3263	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3264	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3272	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3273	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C3274	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1	
C3275	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C3276	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3279	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3280, 81	ECEV0JV330Q	E. CAPACITOR CH6.3V 33U	2	
C3282	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3301-04	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C3308, 09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3313	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3403, 04	VCK0152	C. CAPACITOR	2	
C3405	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3406	ECST1CC336Z	T. CAPACITOR CH 16V 33U	1	
C3407	VCK0151	C. CAPACITOR	1	
C3408, 09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3410	VCK0151	C. CAPACITOR	1	
C3411	ECUX1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C3412, 13	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3414	VCK0151	C. CAPACITOR	1	
C3415-17	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3602, 03	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C3605, 06	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3608	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3609	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	1	
C3610	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3611	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3612	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1	
C3613	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3614	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3615	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C3616	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3617	ECST1CC336Z	T. CAPACITOR CH 16V 33U	1	
C3618	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1	
C3620	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3623	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3624	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3625	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3626	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1	
C3627	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3628	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3629	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C3630	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3631	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3632	ECST1CC336Z	T. CAPACITOR CH 16V 33U	1	
C3633	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1	
C3635, 36	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	2	
C3637	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3638	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3640	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3641	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
C3642	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C3643, 44	ECST1CC336Z	T. CAPACITOR CH 16V 33U	2	
C3645, 46	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	2	
C3647	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	1	
C3648, 49	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3650	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	1	
C3651	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3652	ECST1CC336Z	T. CAPACITOR CH 16V 33U	1	
C3653	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3654	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	1	
C3655	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3656	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3657, 58	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3664	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3667	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3668	ECST1CC336Z	T. CAPACITOR CH 16V 33U	1	
C3670	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3672	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3678	ECEV0JV470Q	E. CAPACITOR CH6.3V 47U	1	
C3679	ECEA0JU331	E. CAPACITOR 6.3V 330P	1	FOR VEP83357A
C3679	VCE0200	E. CAPACITOR	1	FOR VEP86286A
C3801-04	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	4	
C3805	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3806	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C3807, 08	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3809	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3810	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3811	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3812-14	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3	
C3816	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	FOR VEP83357A
C3816	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1	FOR VEP86286A
C3817, 18	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3819	ECEV0JV330Q	E. CAPACITOR CH6.3V 33U	1	
C3820	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3821	ECEV0JV330Q	E. CAPACITOR CH6.3V 33U	1	
C3822	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3830	VCE0200	E. CAPACITOR	1	
C3902, 03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3906	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3920	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3921-25	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	FOR VEP86286A
C3928	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	FOR VEP86286A
C6301-36	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	36	FOR VEP86286A
C6337	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	FOR VEP86286A
C6338	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	FOR VEP86286A
C6339	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	FOR VEP86286A
C6340	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	FOR VEP86286A
C6341	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	FOR VEP86286A
C6342	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	FOR VEP86286A
C6344-52	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	9	FOR VEP86286A
C6360	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	FOR VEP86286A
C6362	ECEV0JV101Q	E. CAPACITOR CH6.3V 100U	1	FOR VEP86286A
C6364	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	FOR VEP86286A
C6366, 67	ECEV0JV220Q	E. CAPACITOR CH6.3V 22U	2	FOR VEP86286A
C6369-74	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6	FOR VEP86286A
D3201	MA142K	D1ODE	1	
D3203, 04	MA704	D1ODE	2	
D6302, 03	LN1251CAL	D1ODE	2	FOR VEP86286A
DL3602	VLD0265	DELAY LINE	1	



AJ-D215P/HE\_D200P/E

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL3002-04	VLF0941C223	FILTER	3		L3614	VL00426J560	COIL 56UH	1	
FL3601	VLF1179	FILTER	1		L3618	VL00319K101	COIL 100UH	1	
FL3602	VLF1337	FILTER	1		L3801	VL00426J220	COIL 22UH	1	
FL6301, 02	VLF1427	FILTER	2	FOR VEP86286A	L3803, 04	VL00319K101	COIL 100UH	2	
IC3006	XC62AP5002P	IC	1		L6301-03	VLP0119	COIL	3	FOR VEP86286A
IC3008	XC62DN5002P	IC	1		P1	VJS3791B036	CONNECTOR (FEMALE)	1	
IC3009	XC62AP3002P	IC	1		P2	VJS3806E140	CONNECTOR (FEMALE)	1	FOR VEP83357A
IC3101, 02	HD151015	IC	2		P3	VJP3125B006	CONNECTOR (MALE) 6P	1	
IC3103	UG10358B	IC	1		P6301, 02	VJP3125B006	CONNECTOR (MALE) 6P	2	FOR VEP86286A
IC3201	EL4583CS	IC	1		P6305	VJS3806E140	CONNECTOR (FEMALE)	1	FOR VEP86286A
IC3202	TC7W14FU	IC	1		P6306, 07	VJS3406D014	CONNECTOR (FEMALE)	2	FOR VEP86286A
IC3203	NVHC04FT	IC	1		Q3201	2SD1819A-R	TRANSISTOR	1	
IC3205	TC7W125FU	IC	1		Q3601-04	2SD1819A-R	TRANSISTOR	4	
IC3206	NJM062M	IC	1		Q3606	2SD1819A-R	TRANSISTOR	1	
IC3210	EHDGA1489G	IC	1		Q3608	2SD1819A-R	TRANSISTOR	1	
IC3213	XC62AP5002P	IC	1		Q3609	2SA1532-C	TRANSISTOR	1	
IC3301	T163G26-1022	IC	1		Q3610-12	2SB1218A-R	TRANSISTOR	3	
IC3305	NVHC74FT	IC	1		Q3613	2SD1819A-R	TRANSISTOR	1	
IC3306, 07	TC4W53FU	IC	2		Q3616	2SB1218A-R	TRANSISTOR	1	
IC3402	MN657021F	IC	1		Q3617	2SA1532-C	TRANSISTOR	1	FOR VEP86286A
IC3601	TC7S08FU	IC	1		Q3801	XN4501	TRANSISTOR-RESISTOR	1	
IC3602	AD817AR	IC	1		Q3804	2SB1218A-R	TRANSISTOR	1	
IC3603	AD826AR	IC	1		Q3805	2SD1819A-R	TRANSISTOR	1	
IC3604	M51272FP	IC	1		Q3806	XN4501	TRANSISTOR-RESISTOR	1	
IC3608-10	TC7S08FU	IC	3		QR3301	UN5213	TRANSISTOR-RESISTOR	1	
IC3611	XC62AP5002P	IC	1		QR3801	XP4312	TRANSISTOR-RESISTOR	1	
IC3801	AD826AR	IC	1		QR6301	UN5214	TRANSISTOR-RESISTOR	1	FOR VEP86286A
IC3802	AD817AR	IC	1		R3021	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
IC3901	T160G41-1437	IC	1		R3044	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP86286A
IC3903	C625123-5106	IC	1		R3044	VLF1149A182	COIL 1800UH	1	FOR VEP83357A
IC3904	CY7C19920ZC	IC	1		R3045	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP86286A
IC3907	TC7S04FU	IC	1		R3045	VLF1149A182	COIL 1800UH	1	FOR VEP83357A
IC3910	CY7C19920ZC	IC	1		R3046, 47	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP86286A
IC6301	M31010M6104H	IC	1	FOR VEP86286A	R3102	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
IC6302	MAX3223CAP	IC	1	FOR VEP86286A	R3104	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
IC6303	S80727ANDQ	IC	1	FOR VEP86286A	R3106	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
IC6304, 05	TC7S14F	IC	2	FOR VEP86286A	R3107-14	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
IC6306	TVHC244FT	IC	1	FOR VEP86286A	R3115	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
IC6307	TVHC240FT	IC	1	FOR VEP86286A	R3116	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
IC6308	TVHC14FT	IC	1	FOR VEP86286A	R3120	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
IC6309	MBLV80B12PFT	IC	1	FOR VEP86286A	R3122-24	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	FOR VEP83357A
IC6310, 11	KM68V1CLTE7L	IC	2	FOR VEP86286A	R3126	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP86286A
IC6312	TC7SH04FU	IC	1	FOR VEP86286A	R3128	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP86286A
IC6313	TSB13LV11PBW	IC	1	FOR VEP86286A	R3130	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP86286A
IC6314	TC7SH04FU	IC	1	FOR VEP86286A	R3203	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
IC6315	MB81V4260S7	IC	1	FOR VEP86286A	R3204	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
IC6317	UPD65849G032	IC	1	FOR VEP86286A	R3205	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
IC6318	TVHC244FT	IC	1	FOR VEP86286A	R3206	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
IC6319, 20	TVHC245FT	IC	2	FOR VEP86286A	R3207	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
IC6321	TVHC163FT	IC	1	FOR VEP86286A	R3208	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
L3101, 02	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3213	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
L3103	VLF1315A102	FILTER	1		R3216	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
L3104, 05	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3217	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
L3201-03	VL00319K101	COIL 100UH	3		R3220	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3207	VLP0155	COIL	1		R3221	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
L3208	VL00319K101	COIL 100UH	1		R3266	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
L3210	VL00319K101	COIL 100UH	1		R3268	ERJ3GEYJ684	M. RESISTOR CH 1/16W 680K	1	
L3263	VL00319K101	COIL 100UH	1		R3272	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
L3264	VL00163J221	COIL 220UH	1		R3274	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3300-07	VLP0155	COIL	8		R3276	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3309-19	VLP0155	COIL	11		R3278	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3402	VL00464K6R8	COIL 6.8UH	1		R3280	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3601	VL00426J220	COIL 22UH	1		R3282	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	FOR VEP83357A
L3602	VL00163J390	COIL 39UH	1		R3285	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
L3603	VL00319K101	COIL 100UH	1		R3286	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
L3604	VL00426J820	COIL 82UH	1		R3287	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
L3605	VL00426J680	COIL 68UH	1		R3288	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
L3607	VL00319K101	COIL 100UH	1		R3291	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
L3608	VL00426J820	COIL 82UH	1		R3292	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
L3609	VL00426J680	COIL 68UH	1		R3303	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
L3611, 12	VL00426J470	COIL 47UH	2		R3307-09	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	FOR VEP83357A
L3613	VL00426J180	COIL 18UH	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3311	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3685	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3316, 17	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3686	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3321	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3687, 88	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A
R3323	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3690	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3330	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3695	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R3332, 33	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3696, 97	ERJ3RBD132	M.RESISTOR CH 1/16W 1.3K	2	
R3335	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3701	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3336	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3703	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3370	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3706-08	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP83357A
R3401-08	EXB24V151J	COMBI. R-R 150	8		R3801	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3409	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3802	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3410	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1		R3806, 07	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R3411	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3808	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3412	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3810	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3413	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3812	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1	
R3414-16	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	3		R3813	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3417	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1		R3814	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R3418	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3815	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3426, 27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2		R3816	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R3430	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R3817	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3601	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3819	ERJ3RED680	M.RESISTOR CH 1/16W 68	1	
R3603	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3820	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3605	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3821	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3606	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R3822	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3607	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3823	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3608	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3825	ERJ3RED680	M.RESISTOR CH 1/16W 68	1	
R3609	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3827	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3610	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1		R3828	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3611	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3829	ERJ3RBD912	M.RESISTOR CH 1/16W 9.1K	1	
R3612	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3830	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R3614, 15	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R3833, 34	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	2	
R3616	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1		R3835	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R3619	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3836	VRT014116250	THERMISTOR	1	
R3620	VRT014116250	THERMISTOR	1		R3837	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R3622, 23	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3838	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3624	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R3839	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A
R3625	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1		R3840	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R3626	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1		R3841	ERJ3RED680	M.RESISTOR CH 1/16W 68	1	
R3627	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R3902	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A
R3628, 29	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2		R3907, 08	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A
R3631	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3909	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3632	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3910	ERJ3RBD111	M.RESISTOR CH 1/16W 110	1	
R3633, 34	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R3911	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3635, 36	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2		R3917	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A
R3637	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1		R3918-21	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	FOR VEP86286A
R3638	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R3926-33	EXB24V151J	COMBI. R-R 150	8	
R3639, 40	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A	R3935-42	EXB24V151J	COMBI. R-R 150	8	
R3641	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1		R3946, 47	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A
R3642	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R3948, 49	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R3645	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3950-52	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP83357A
R3646, 47	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R3954	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A
R3648, 49	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2		R3996	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A
R3650	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1		R6301	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A
R3651	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R6302	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP86286A
R3652, 53	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83357A	R6303	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP86286A
R3654	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1		R6304	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A
R3655	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R6308	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP86286A
R3656	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		R6311, 12	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP86286A
R3658	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R6315	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A
R3660	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R6316	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	FOR VEP86286A
R3661	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		R6317, 18	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP86286A
R3663	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R6319	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A
R3665	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1		R6320-22	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP86286A
R3666	ERJ3RBD471	M.RESISTOR CH 1/16W 470	1		R6324	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP86286A
R3667	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83357A	R6326, 27	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	FOR VEP86286A
R3668, 69	ERJ3RBD241	M.RESISTOR CH 1/16W 240	2		R6331	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	FOR VEP86286A
R3671	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R6333	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	FOR VEP86286A
R3675, 76	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R6337, 38	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	FOR VEP86286A
R3677	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	1		R6339, 40	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP86286A
R3678, 79	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	2		R6341, 42	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	FOR VEP86286A
R3680	ERJ3RBD273	M.RESISTOR CH 1/16W 27K	1		R6343-45	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP86286A
R3681	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1		R6348, 49	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	2	FOR VEP86286A
R3682	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R6350-53	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	4	FOR VEP86286A
R3683	ERJ3RBD121	M.RESISTOR CH 1/16W 120	1		R6355, 56	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	FOR VEP86286A
R3684	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1		R6358, 59	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	FOR VEP86286A



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6360-62	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP86286A					
R6363-66	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	FOR VEP86286A					
R6367	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6368-74	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	7	FOR VEP86286A					
R6375-80	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6	FOR VEP86286A					
R6381, 82	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	2	FOR VEP86286A					
R6383	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A					
R6384	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6385	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A					
R6386	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6387	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A					
R6388	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6389	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP86286A					
R6390	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	FOR VEP86286A					
R6391	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP86286A					
R6392	ERJ6RBD622	M.RESISTOR CH 1/10W 6.2K	1	FOR VEP86286A					
R6393-95	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	FOR VEP86286A					
R6396-99	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4	FOR VEP86286A					
R6400	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6401, 02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP86286A					
R6403	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	FOR VEP86286A					
R6404-07	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	FOR VEP86286A					
R6408-10	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	FOR VEP86286A					
R6420-25	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6	FOR VEP86286A					
R6434-36	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP86286A					
R6439	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP86286A					
R6440, 41	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	FOR VEP86286A					
R6443, 44	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP86286A					
SW1	VSS0342	SWITCH	1	FOR VEP86286A					
SW6302	VSS0367-04B	SWITCH	1	FOR VEP86286A					
SW6303	VSS0342	SWITCH	1	FOR VEP86286A					
TG3001	EYF6CU	TEST POINT	1						
TG3601	EYF6CU	TEST POINT	1						
TG3901	EYF6CU	TEST POINT	1						
TG6301	EYF6CU	TEST POINT	1						
TP3201-04	EYF6CU	TEST POINT	4						
TP3301	EYF6CU	TEST POINT	1						
TP3307-10	EYF6CU	TEST POINT	4						
TP3401-03	EYF6CU	TEST POINT	3						
TP3801-04	EYF6CU	TEST POINT	4						
VC3601	VCV0047	TRIMMER	1						
VR3201	EVM7JGA00B14	V.RESISTOR 10K	1						
VR3602	EVM7JGA00B53	V.RESISTOR 5K	1						
VR3603	EVM7JGA00B13	V.RESISTOR 1K	1						
VR3604	EVM7JGA00B22	V.RESISTOR 200	1						
VR3605	EVM7JGA00B13	V.RESISTOR 1K	1						
VR3607	EVM7JGA00B14	V.RESISTOR 10K	1						
VR3608	EVM7JGA00B53	V.RESISTOR 5K	1						
VR3609, 10	EVM7JGA00B23	V.RESISTOR 2K	2						
VR3801	EVM7JGA00B23	V.RESISTOR 2K	1						
VR3802, 03	EVM7JGA00B13	V.RESISTOR 1K	2						
VR3804	EVM7JGA00B23	V.RESISTOR 2K	1						
X3201	VSX0677	CRYSTAL OSCILLATOR	1						
X6301	VSX0833	CRYSTAL OSCILLATOR	1	FOR VEP86286A					
X6302	VSX0974	CRYSTAL OSCILLATOR	1	FOR VEP86286A					
		MISCELLANEOUS							
	VMS4913	PIN	4						
	XYN3+K5	SCREW	4						
■ E29	VEP86280A	DVC PRO TERMINAL P.C.BOARD	1	(RTL)					
P1	VJP3993	CONNECTOR (MALE)	1						
P2	VJP1599T	CONNECTOR (MALE)	1						



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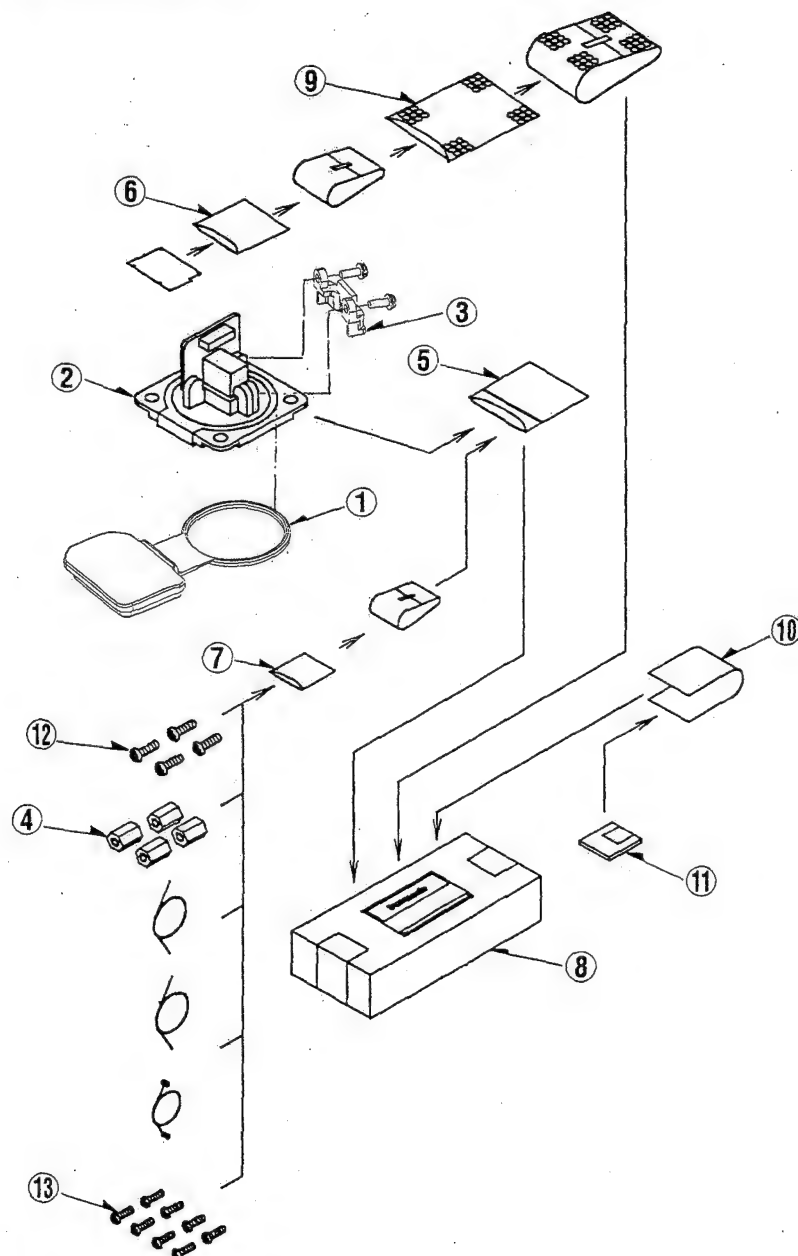
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AJ-YAD210P

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## PACKING PARTS ASSEMBLY



## PACKING PARTS ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VGF0747	CONNECTOR CAP	1						
2	VJF1344	CONNECTOR HOLDER (1)	1						
3	VJF1345	CONNECTOR HOLDER (2)	1						
4	VMS4913	P.C.B. POST	4						
5	VPF0182	POLYETHYLENE BAG	1						
6	VPF0359	CONDUCTIVE BAG	1						
7	VPF0508	POLYETHYLENE BAG	1						
8	VPG6296	PACKING CASE	1						
9	VPN2445	CUSHION	1						
10	VQT7583	OPERATING INSTRUCTIONS	1						
11	VFG0469A	FLOPPY DISK	1						
12	XYN2+J6	SCREW	4						
13	XYN3+K5	SCREW	8						

## ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP86279A	DVCPRO I/F P.C. BOARD	1	(RTL)
■	VEP86280A	DVCPRO CONNECTOR P.C. BOARD	1	(RTL)
■	VEP86279A	DVCPRO I/F P.C. BOARD	1	(RTL)
C6301-36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	36	
C6337	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C6338	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C6339	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6340	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C6341	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6342	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6344-52	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C6360	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C6362	ECEVOJV101Q	E.CAPACITOR CH6.3V 100U	1	
C6364	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C6366, 67	ECEVOJV220Q	E.CAPACITOR CH6.3V 22U	2	
C6369-73	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
D6301-03	LN1251CAL	DIODE	3	
FL6301, 02	VLF1427	FILTER	2	
IC6301	M31010M6104H	IC	1	
IC6302	MAX3223CAP	IC	1	
IC6303	S80727ANDQ	IC	1	
IC6304, 05	TC7S14F	IC	2	
IC6306	TVHC244FT	IC	1	
IC6307	TVHC240FT	IC	1	
IC6308	TVHC14FT	IC	1	
IC6309	MBLV80B12PF	IC	1	
IC6310, 11	KW68V1CLT7L	IC	2	
IC6312	TC7SH04FU	IC	1	
IC6313	TSB13LV11PBW	IC	1	
IC6314	TC7SH04FU	IC	1	
IC6315	MB81V4260S7	IC	1	
IC6317	UPD65849G032	IC	1	
IC6318	TVHC244FT	IC	1	
IC6319, 20	TVHC245FT	IC	2	
IC6321	TVHC163FT	IC	1	
L6301-03	VLP0119	COIL	3	
L6305, 06	VLQ0319K470	COIL 47UH	2	
P6301, 02	VJP3125B006	CONNECTOR (MALE) 6P	2	
P6305	VJS3806E140	CONNECTOR (FEMALE)	1	
QR6301	UN5214	TRANSISTOR	1	
R6301	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6302	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6303	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6305	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6308	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	1	
R6311, 12	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	2	
R6316	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6317, 18	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	2	
R6320-22	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	3	
R6324	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6326, 27	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R6331	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6333	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6337, 38	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6339, 40	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6341, 42	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6343-45	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	3	
R6347-49	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	3	
R6350-53	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	4	
R6355, 56	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6358, 59	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6360-62	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	3	
R6363-66	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R6367	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6368-74	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	7	
R6375-80	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	6	
R6381, 82	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	2	
R6383	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6384	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6385	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6386	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6387	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6388	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6389	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6390	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6391	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6392	ERJ6RBD622	M.RESISTOR CH 1/10W 6.2K	1	
R6393-95	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R6396-99	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4	
R6400	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6401, 02	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	2	
R6403	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
R6404-07	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	4	
R6408-10	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R6420-25	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	6	
R6434-36	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	3	
R6439	ERJ3GEYR000	M.RESISTOR CH 1/16W 0	1	
R6440	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
SW6301	VSP1005	SWITCH	1	
SW6302	VSS0367-04B	SWITCH	1	
SW6303	VSS0342	SWITCH	1	
TG6301	EYF6CU	TEST POINT	1	
TG6303	EYF6CU	TEST POINT	1	
TG6305	EYF6CU	TEST POINT	1	
TP6302-07	EYF6CU	TEST POINT	6	
TP6315-19	EYF6CU	TEST POINT	5	
TP6322-25	EYF6CU	TEST POINT	4	
TP6351	EYF6CU	TEST POINT	1	
TP6353	EYF6CU	TEST POINT	1	
TP6356, 57	EYF6CU	TEST POINT	2	
X6301	VSX0833	CRYSTAL OSCILLATOR	1	
X6302	VSX0974	CRYSTAL OSCILLATOR	1	

# Technical Bulletin

## Supplement to the Service Manual

Broadcast Product

### Subject : Addition of Screw Adhesive

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AJ-D200E	65	VSDD9708M604	I9TKA0001
AJ-D215HE	2	VSD9904M007	I9TKA0001

Frame Assembly (1)  
Frame Assembly (2)

V19921# 1030051

V24392# 2023112 ✓

Symptom : The screws on the Frame Assembly (1) and (2) sections may be loosened.

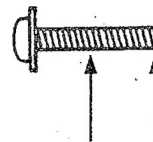
Remedy : Screw adhesive is applied to the screws on the Frame Assembly (1) and (2) sections.

- Regarding the locations of the adhesive application to the screws on the Frame Assembly (1) and (2) sections, refer to the next page.
- Specification of screw adhesive application

\* Approx. 0.02g of the adhesive must be applied to the surface of the thread from the tip to the half of the thread section.

**\*Note\***

After applying the adhesive, check that it covers the visible area on the thread.



Apply adhesive to the half of the thread section.

TM4211TM4226TM4229:3

# Panasonic

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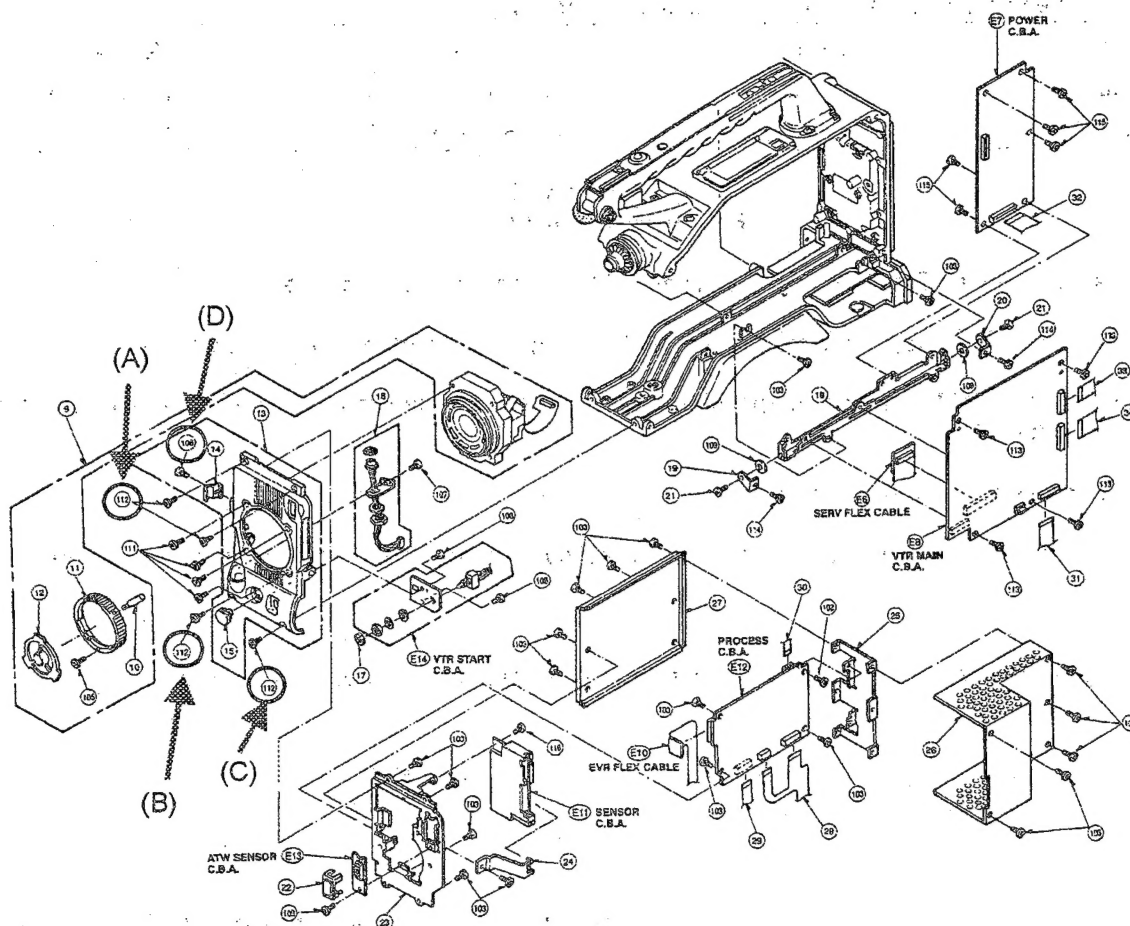
## Adhesive Application Positions

- 1) Frame Assembly (1) ... 5 positions
- 2) Frame Assembly (2) ... 23 positions

## Reference Exploded Views of Adhesive Application Locations

\* As per the Exploded Views of Service Manual

- 1). Frame Assembly (1)  
(Application locations)  
A (X2), B (X1), C (X1), D (X1)





## 2). Frame Assembly (2)

(Application locations)

A (X4), B (X2), C (X2), D (X2), E (X2), F (X2), G (X1), H (X1), I (X1), J (X2), K (X2), L(X2)

